

BEST AVAILABLE COPY

分 冊

Separate Volume

出願番号 特願2003-131392

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分冊番号 2/2

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PRIORITY DOCUMENT

出証番号 出証特2004-3059662

His Lys Arg Lys Lys Glu Arg Lys Lys Glu

305

310

<210> 400

<211> 264

<212> PRT

<213> Homo sapiens

<400> 400

Met Thr Gly Ser Asn Ser His Ile Thr Ile Leu Thr Leu Asn Val Asn

1

5

10

15

Gly Leu Asn Thr Pro Ile Lys Arg His Arg Leu Ala Ser Trp Ile Lys

20

25

30

Ser Gln Asp Pro Ser Val Cys Cys Ile Gln Glu Thr His Leu Ile Cys

35

40

45

Lys Asp Ala Tyr Arg Leu Lys Ile Lys Gly Trp Arg Lys Ile Tyr Gln

50

55

60

Ala Asn Arg Lys Gln Lys Lys Ala Gly Val Ala Ile Leu Val Ser Asp

65

70

75

80

Lys Ser Asp Phe Lys Pro Thr Lys Ile Lys Arg Asp Lys Lys Gly His

85

90

95

Tyr Ile Met Val Lys Gly Ser Met Gln Gln Glu Glu Leu Thr Ile Leu

100

105

110

Asn Ile Tyr Ala Pro Asn Thr Gly Ala Pro Arg Phe Ile Asn Glu Val

115

120

125

Leu Arg Asp Pro Gln Arg Asn Leu Asp Ser His Thr Ile Ile Met Gly

130

135

140

Asp Phe Asn Thr Pro Leu Ser Ile Phe Asp Arg Ser Thr Arg Gln Lys

145 150 155 160
 Val Asn Lys Asp Thr Gln Asp Leu Asn Leu Thr Leu Gln Gln Ala Asp
 165 170 175
 Leu Arg Asp Ile Tyr Arg Thr Leu His Pro Lys Ser Thr Glu Tyr Thr
 180 185 190
 Phe Phe Ser Ala Leu His His Thr Tyr Ser Lys Thr Asp His Ile Leu
 195 200 205
 Gly Ser Lys Ala Leu Leu Ser Lys Cys Lys Arg Thr Glu Ile Thr Thr
 210 215 220
 Asn Cys Leu Ser Asp His Ser Ala Ile Lys Leu Glu Leu Arg Ile Lys
 225 230 235 240
 Lys Leu Thr Gln Tyr His Ile Ser Thr Trp Lys Leu Asn Asn Leu Leu
 245 250 255
 Leu Asn Asp Tyr Trp Val Asn Asn
 260

<210> 401

<211> 852

<212> PRT

<213> Homo sapiens

<400> 401

Met Leu Ile Thr Glu Arg Lys His Phe Arg Ser Gly Arg Ile Ala Gln
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 Ser Met Ser Glu Ala Asn Leu Ile Asp Met Glu Ala Gly Lys Val Ser
 20 25 30
 Lys Ser Cys Asn Ile Thr Glu Cys Gln Asp Pro Asp Leu Leu His Asn
 35 40 45

Trp Pro Asp Ala Phe Thr Leu Arg Gly Asn Asn Ala Ser Lys Val Ala
50 55 60
Asn Pro Phe Trp Asn Gln Leu Ser Ala Ser Asn Pro Phe Leu Asp Asp
65 70 75 80
Ile Thr Gln Leu Arg Asn Asn Arg Lys Arg Asn Asn Ile Ser Ile Leu
85 90 95
Lys Glu Asp Pro Phe Leu Phe Cys Arg Glu Ile Glu Asn Gly Asn Ser
100 105 110
Phe Asp Ser Ser Gly Asp Glu Leu Asp Val His Gln Leu Leu Arg Gln
115 120 125
Thr Ser Ser Arg Asn Ser Gly Arg Ser Lys Ser Val Ser Glu Leu Leu
130 135 140
Asp Ile Leu Asp Asp Thr Ala His Ala His Gln Ser Ile His Asn Ser
145 150 155 160
Asp Gln Ile Leu Leu His Asp Leu Glu Trp Pro Lys Asn Asp Arg Glu
165 170 175
Ala Tyr Lys Met Ala Trp Leu Ser Gln Arg Gln Leu Ala Arg Ser Cys
180 185 190
Leu Asp Leu Asn Thr Ile Ser Gln Ser Pro Gly Trp Ala Gln Thr Gln
195 200 205
Leu Ala Glu Val Thr Ile Ala Cys Lys Val Asn His Gln Gly Gly Ser
210 215 220
Val Gln Leu Pro Glu Ser Asp Ile Thr Val His Val Pro Gln Gly His
225 230 235 240
Val Ala Val Gly Glu Phe Gln Glu Val Ser Leu Arg Ala Phe Leu Asp
245 250 255
Pro Pro His Met Leu Asn His Asn Leu Ser Cys Thr Val Ser Pro Leu
260 265 270
Leu Glu Ile Met Leu Gly Asn Leu Asn Thr Met Glu Ala Leu Leu Leu

| | | |
|---|-----|-----|
| 275 | 280 | 285 |
| Glu Met Lys Ile Gly Ala Glu Val Arg Lys Asp Pro Phe Ser Gln Val | | |
| 290 | 295 | 300 |
| Met Thr Glu Met Val Cys Leu His Ser Leu Gly Lys Glu Gly Pro Phe | | |
| 305 | 310 | 315 |
| Lys Val Leu Ser Asn Cys Tyr Ile Tyr Lys Asp Thr Ile Gln Val Lys | | |
| 325 | 330 | 335 |
| Leu Ile Asp Leu Ser Gln Val Met Tyr Leu Val Val Ala Ala Gln Ala | | |
| 340 | 345 | 350 |
| Lys Ala Leu Pro Ser Pro Ala Ala Thr Ile Trp Asp Tyr Ile His Lys | | |
| 355 | 360 | 365 |
| Thr Thr Ser Ile Gly Ile Tyr Gly Pro Lys Tyr Ile His Pro Asn Phe | | |
| 370 | 375 | 380 |
| Thr Val Val Leu Thr Val Cys Gly His Asn Tyr Met Pro Gly Gln Leu | | |
| 385 | 390 | 395 |
| Thr Ile Ser Asp Ile Lys Lys Gly Gly Lys Asn Ile Ser Pro Val Val | | |
| 405 | 410 | 415 |
| Phe Gln Leu Trp Gly Lys Gln Ser Phe Leu Leu Asp Lys Pro Gln Asp | | |
| 420 | 425 | 430 |
| Leu Ser Ile Ser Ile Phe Ser Cys Asp Pro Asp Phe Glu Val Lys Thr | | |
| 435 | 440 | 445 |
| Glu Gly Glu Arg Lys Glu Ile Lys Gln Lys Gln Leu Glu Ala Gly Glu | | |
| 450 | 455 | 460 |
| Val Val His Gln Gln Phe Leu Phe Ser Leu Val Glu His Arg Glu Met | | |
| 465 | 470 | 475 |
| His Leu Phe Asp Phe Cys Val Gln Val Glu Pro Pro Asn Gly Glu Pro | | |
| 485 | 490 | 495 |
| Val Ala Gln Phe Ser Ile Thr Thr Pro Asp Pro Thr Pro Asn Leu Lys | | |
| 500 | 505 | 510 |

Arg Leu Leu Asn Leu Pro Gly Tyr Leu Gln Lys Lys Glu Glu Ile Lys
515 520 525

Ser Ala Pro Leu Ser Pro Lys Ile Leu Val Lys Tyr Pro Thr Phe Gln
530 535 540

Asp Lys Thr Leu Asn Phe Ser Asn Tyr Gly Val Thr Leu Lys Ala Val
545 550 555 560

Leu Arg Gln Ser Lys Ile Asp Tyr Phe Leu Glu Tyr Phe Lys Gly Asp
565 570 575

Thr Ile Ala Leu Leu Gly Glu Gly Lys Val Lys Ala Ile Gly Gln Ser
580 585 590

Lys Val Lys Glu Trp Tyr Val Gly Val Leu Arg Gly Lys Ile Gly Leu
595 600 605

Val His Cys Lys Asn Val Lys Val Ile Ser Lys Glu Gln Val Met Phe
610 615 620

Met Ser Asp Ser Val Phe Thr Thr Arg Asn Leu Leu Glu Gln Ile Val
625 630 635 640

Leu Pro Leu Lys Lys Leu Thr Tyr Ile Tyr Ser Val Val Leu Thr Leu
645 650 655

Val Ser Glu Lys Val Tyr Asp Trp Lys Val Leu Ala Asp Val Leu Gly
660 665 670

Tyr Ser His Leu Ser Leu Glu Asp Phe Asp Gln Ile Gln Ala Asp Lys
675 680 685

Glu Ser Glu Lys Val Ser Tyr Val Ile Lys Lys Leu Lys Glu Asp Cys
690 695 700

His Thr Glu Arg Asn Thr Arg Lys Phe Leu Tyr Glu Leu Ile Val Ala
705 710 715 720

Leu Leu Lys Met Asp Cys Gln Glu Leu Val Ala Arg Leu Ile Gln Glu
725 730 735

Ala Ala Val Leu Thr Ser Ala Val Lys Leu Gly Lys Gly Trp Arg Glu

| | | |
|---|-----|-----|
| 740 | 745 | 750 |
| Leu Ala Glu Lys Leu Val Arg Leu Thr Lys Gln Gln Met Glu Ala Tyr | | |
| 755 | 760 | 765 |
| Glu Ile Pro His Arg Gly Asn Thr Gly Asp Val Ala Val Glu Met Met | | |
| 770 | 775 | 780 |
| Trp Lys Pro Ala Tyr Asp Phe Leu Tyr Thr Trp Ser Ala His Tyr Gly | | |
| 785 | 790 | 795 |
| Asn Asn Tyr Thr Asp Val Leu Gln Asp Leu Gln Ser Ala Leu Asp Arg | | |
| 805 | 810 | 815 |
| Met Lys Asn Pro Val Thr Lys His Trp Arg Glu Leu Thr Gly Val Leu | | |
| 820 | 825 | 830 |
| Ile Leu Val Asn Ser Leu Glu Val Leu Arg Val Thr Ala Phe Ser Thr | | |
| 835 | 840 | 845 |
| Ser Glu Glu Val | | |
| 850 | | |

<210> 402

<211> 865

<212> PRT

<213> Homo sapiens

<400> 402

| | | |
|---|----|----|
| Met Ser Leu Gln Asp Ser Thr Leu Ser Arg Glu Gly Lys Pro Glu Gly | | |
| 1 | 5 | 10 |
| Glu Ile Met Ala Ala Val Phe Phe Ser Val Gly Arg Leu Ser Pro Glu | | |
| 20 | 25 | 30 |
| Val Thr Gln Pro Asp Glu Asp Leu His Leu Gln Ala Glu Glu Thr Gln | | |
| 35 | 40 | 45 |

Leu Val Lys Glu Ser Val Thr Phe Lys Asp Val Ala Ile Asp Phe Thr
 50 55 60
 Leu Glu Glu Trp Arg Leu Met Asp Pro Thr Gln Arg Asn Leu His Lys
 65 70 75 80
 Asp Val Met Leu Glu Asn Tyr Arg Asn Leu Val Ser Leu Gly Leu Ala
 85 90 95
 Val Ser Lys Pro Asp Met Ile Ser His Leu Glu Asn Gly Lys Gly Pro
 100 105 110
 Trp Val Thr Val Arg Glu Ile Ser Arg Ile Pro Tyr Pro Asp Met Glu
 115 120 125
 Pro Lys Pro Ala Thr Lys Asn Ala Thr Arg Thr Lys Ala Ile Ser Glu
 130 135 140
 Asp Leu Ser Gln Glu Ala Ile Leu Glu Lys Leu Thr Glu Asn Gly Leu
 145 150 155 160
 Trp Asp Ser Arg Met Glu Gly Leu Trp Lys Trp Asn Asp Arg Ile Leu
 165 170 175
 Arg Leu Gln Asn Asn Gln Glu Asn His Leu Ser Gln Arg Ile Ile Pro
 180 185 190
 Leu Lys Lys Thr Pro Thr Ser Gln Arg Gly Phe Arg Phe Glu Ser Ile
 195 200 205
 Leu Ile Pro Glu Pro Gly Ile Ala Thr Glu Glu Leu His Ser Arg Cys
 210 215 220
 Gln Thr Gln Glu Glu Asn Phe Thr Glu Asn Leu Asn Leu Ile Thr Asp
 225 230 235 240
 Thr His Leu Gly Lys Ile Ile Cys Lys Glu Met Lys Gly Ser Lys Ala
 245 250 255
 Ile Arg Gln Thr Ser Glu Leu Thr Leu Gly Lys Lys Ser Asn Asn Lys
 260 265 270
 Glu Lys Pro Tyr Lys Cys Ser Thr Cys Glu Lys Ala Phe His Tyr Arg

| | | |
|---|-----|-----|
| 275 | 280 | 285 |
| Ser Leu Leu Ile Gln His Gln Arg Thr His Thr Lys Glu Lys Pro Tyr | | |
| 290 | 295 | 300 |
| Glu Cys Asn Glu Cys Gly Lys Thr Phe Ser Gln Pro Ser Tyr Leu Ser | | |
| 305 | 310 | 315 |
| Gln His Lys Lys Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu | | |
| 325 | 330 | 335 |
| Cys Gly Lys Ala Phe Ile Ala Ser Ser Ser Leu Met Val His Gln Arg | | |
| 340 | 345 | 350 |
| Ile His Thr Lys Glu Lys Pro Tyr Gln Cys Asn Val Cys Gly Lys Ser | | |
| 355 | 360 | 365 |
| Phe Ser Gln Cys Ala Arg Leu Asn Gln His Gln Arg Ile Gln Thr Gly | | |
| 370 | 375 | 380 |
| Glu Lys Pro Tyr Lys Cys Ser Glu Cys Gly Lys Ala Phe Ser Asp Lys | | |
| 385 | 390 | 395 |
| Ser Lys Leu Ala Arg His Gln Glu Thr His Asn Gly Glu Lys Pro Tyr | | |
| 405 | 410 | 415 |
| Lys Cys Asp Asp Cys Gly Lys Ala Phe Arg Asn Lys Ser Tyr Leu Ser | | |
| 420 | 425 | 430 |
| Val His Gln Lys Thr His Thr Glu Glu Lys Pro Tyr Gln Cys Asn Glu | | |
| 435 | 440 | 445 |
| Cys Gly Lys Ser Phe Lys Asn Thr Thr Ile Phe Asn Val His Gln Arg | | |
| 450 | 455 | 460 |
| Ile His Thr Gly Glu Lys Pro Phe Arg Cys Asn Glu Cys Gly Lys Ala | | |
| 465 | 470 | 475 |
| Tyr Arg Ser Asn Ser Ser Leu Ile Val His Ile Arg Thr His Thr Gly | | |
| 485 | 490 | 495 |
| Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys Ala Phe Asn Arg Ile | | |
| 500 | 505 | 510 |

Ala Asn Phe Thr Glu His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr
515 520 525

Lys Cys Asn Glu Cys Gly Lys Ala Phe Ile Asn Tyr Ser Cys Leu Thr
530 535 540

Val His His Arg Met His Thr Gly Glu Lys Pro Tyr Lys Cys Thr Glu
545 550 555 560

Cys Gly Lys Ala Phe Met Arg Ser Ser Ser Leu Ile Ile His Gln Cys
565 570 575

Ile His Thr Glu Glu Lys Pro Tyr Leu Cys Asn Glu Cys Gly Glu Ser
580 585 590

Phe Arg Ile Lys Ser His Leu Thr Val His Gln Arg Ile His Thr Gly
595 600 605

Glu Lys Pro Tyr Lys Cys Thr Asp Cys Glu Arg Ala Phe Thr Lys Met
610 615 620

Val Asn Leu Lys Glu His Gln Lys Ile His Thr Gly Val Lys Pro Tyr
625 630 635 640

Lys Cys Tyr Asp Cys Gly Lys Ser Phe Arg Thr Lys Ser Tyr Leu Ile
645 650 655

Val His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu
660 665 670

Cys Glu Lys Ala Phe Thr Asn Thr Ser Gln Leu Thr Val His Gln Arg
675 680 685

Arg His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val
690 695 700

Phe Thr Ser Asn Ser Gly Phe Asn Thr His Gln Arg Thr His Thr Gly
705 710 715 720

Glu Lys Pro Phe Lys Cys Asn Asp Cys Gly Lys Ala Phe Ser Gln Met
725 730 735

Val His Val Thr Glu His Gln Lys Ile His Ser Gly Glu Lys Pro Tyr

| | | |
|---|-----|-----|
| 740 | 745 | 750 |
| Lys Cys Asp Val Cys Gly Lys Ala Phe Arg Arg Gly Ser Tyr Leu Thr | | |
| 755 | 760 | 765 |
| Val His Trp Arg Thr His Thr Gly Glu Lys Pro Tyr Thr Cys Lys Glu | | |
| 770 | 775 | 780 |
| Cys Gly Lys Gly Cys Ile Thr Leu Ser Gln Leu Thr Leu His Gln Arg | | |
| 785 | 790 | 795 |
| Ile His Thr Gly Glu Arg Pro Tyr Lys Cys Glu Glu Cys Gly Lys Ala | | |
| 805 | 810 | 815 |
| Phe Arg Thr Asn Ser Asp Phe Thr Val His Leu Arg Met His Thr Gly | | |
| 820 | 825 | 830 |
| Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Arg Ser Ser | | |
| 835 | 840 | 845 |
| Ser Ser Leu Thr Val His Gln Arg Ile His Gln Arg Glu Thr Gln Leu | | |
| 850 | 855 | 860 |
| Ile | | |
| 865 | | |

<210> 403

<211> 547

<212> PRT

<213> Homo sapiens

<400> 403

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Glu | Gly | Arg | Gln | Thr | Pro | Ala | Ser | Thr | Leu | Glu | Gln | Asp | Ala |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Thr | Asp | Tyr | Arg | Leu | Arg | Ser | Leu | Arg | Lys | Leu | Leu | Ala | Gln | Pro | Arg |
| | | | | 20 | | | | 25 | | | | | 30 | | |

Glu Gly Leu Leu Ala Pro Phe Ser Lys Arg Asn Ser Thr Ala Ser Phe
 35 40 45
 Pro Gly Arg Thr Ser His Ile Pro Val Gln Gln Pro Glu Lys Arg Lys
 50 55 60
 Gln Lys Pro Ser Pro Glu Pro Ser Gln Asp Ser Pro His Ser Asp Lys
 65 70 75 80
 Trp Pro Pro Gly His Pro Val Lys Asn Leu Pro Gln Met Arg Gly Pro
 85 90 95
 Arg Pro Arg Pro Ala Gly Asp Ser Pro Arg Lys Thr Gln Trp Leu Asn
 100 105 110
 Gln Val Glu Ser Tyr Ile Ala Glu Gln Arg Arg Gly Asp Arg Met Arg
 115 120 125
 Pro Gln Ala Pro Gly Arg Gly Trp His Gly Glu Glu Glu Val Val Ala
 130 135 140
 Ala Ala Gly Gln Glu Gly Gln Val Glu Gly Glu Glu Glu Gly Glu Glu
 145 150 155 160
 Glu Glu Glu Glu Glu Asp Met Ser Glu Val Phe Glu Tyr Val Pro Val
 165 170 175
 Phe Asp Pro Val Val Asn Trp Asp Gln Thr Phe Ser Ala Arg Asn Leu
 180 185 190
 Asp Phe Gln Ala Leu Arg Thr Asp Trp Ile Asp Leu Ser Cys Asn Thr
 195 200 205
 Ser Gly Asn Leu Leu Leu Pro Glu Gln Glu Ala Leu Glu Val Thr Arg
 210 215 220
 Val Phe Leu Lys Lys Leu Asn Gln Arg Ser Arg Gly Arg Tyr Gln Leu
 225 230 235 240
 Gln Arg Ile Val Asn Val Glu Lys Arg Gln Asp Gln Leu Arg Gly Gly
 245 250 255
 Arg Tyr Leu Leu Glu Leu Glu Leu Leu Glu Gln Gly Gln Arg Val Val

| | | |
|---|-----|-----|
| 260 | 265 | 270 |
| Arg Leu Ser Glu Tyr Val Ser Ala Arg Gly Trp Gln Gly Ile Asp Pro | | |
| 275 | 280 | 285 |
| Ala Gly Gly Glu Glu Val Glu Ala Arg Asn Leu Gln Gly Leu Val Trp | | |
| 290 | 295 | 300 |
| Asp Pro His Asn Arg Arg Arg Gln Val Leu Asn Thr Arg Ala Gln Glu | | |
| 305 | 310 | 315 |
| Pro Lys Leu Cys Trp Pro Gln Gly Phe Ser Trp Ser His Arg Ala Val | | |
| 325 | 330 | 335 |
| Val His Phe Val Val Pro Val Lys Asn Gln Ala Arg Trp Val Gln Gln | | |
| 340 | 345 | 350 |
| Phe Ile Lys Asp Met Glu Asn Leu Phe Gln Val Thr Gly Asp Pro His | | |
| 355 | 360 | 365 |
| Phe Asn Ile Val Ile Thr Asp Tyr Ser Ser Glu Asp Met Asp Val Glu | | |
| 370 | 375 | 380 |
| Met Ala Leu Lys Arg Ser Lys Leu Arg Ser Tyr Gln Tyr Val Lys Leu | | |
| 385 | 390 | 395 |
| Ser Gly Asn Phe Glu Arg Ser Ala Gly Leu Gln Ala Gly Ile Asp Leu | | |
| 405 | 410 | 415 |
| Val Lys Asp Pro His Ser Ile Ile Phe Leu Cys Asp Leu His Ile His | | |
| 420 | 425 | 430 |
| Phe Pro Ala Gly Val Ile Asp Ala Ile Arg Lys His Cys Val Glu Gly | | |
| 435 | 440 | 445 |
| Lys Met Ala Phe Ala Pro Met Val Met Arg Leu His Cys Gly Ala Thr | | |
| 450 | 455 | 460 |
| Pro Gln Trp Pro Glu Gly Tyr Trp Glu Val Asn Gly Phe Gly Leu Leu | | |
| 465 | 470 | 475 |
| Gly Ile Tyr Lys Ser Asp Leu Asp Arg Ile Gly Gly Met Asn Thr Lys | | |
| 485 | 490 | 495 |

Glu Phe Arg Asp Arg Trp Gly Gly Glu Asp Trp Glu Leu Leu Asp Arg

500

505

510

Ile Leu Gln Ala Gly Leu Asp Val Glu Arg Leu Ser Leu Arg Asn Phe

515

520

525

Phe His His Phe His Ser Lys Arg Gly Met Trp Ser Arg Arg Gln Met

530

535

540

Lys Thr Leu

545

<210> 404

<211> 443

<212> PRT

<213> Homo sapiens

<400> 404

Met Ser Gln Arg Gln Tyr Pro Glu Cys Tyr Leu Ala Pro Asn Gly Cys

1

5

10

15

Leu Val Ser Asn Cys Gly Val Asn Lys Met Ser Asn Glu Glu Leu Val

20

25

30

Gly Gln Asn His Gly Met Glu Gly Glu Ala Cys Thr Gly Gly Asp Val

35

40

45

Thr Phe Ser Asp Val Ala Ile Asp Phe Ser His Glu Glu Trp Ala Cys

50

55

60

Leu Asp Ser Ala Gln Arg Asp Leu Tyr Lys Asp Val Met Val Gln Asn

65

70

75

80

Tyr Glu Asn Leu Val Ser Val Gly Leu Ser Val Thr Lys Pro Tyr Val

85

90

95

Ile Met Leu Leu Glu Asp Gly Lys Glu Pro Trp Met Met Glu Lys Lys

| | | |
|---|-----|-----|
| 100 | 105 | 110 |
| Leu Ser Lys Asp Trp Glu Ser Arg Trp Glu Asn Lys Glu Leu Ser Thr | | |
| 115 | 120 | 125 |
| Lys Lys Asp Ile Tyr Asp Glu Asp Ser Pro Gln Pro Val Thr Met Glu | | |
| 130 | 135 | 140 |
| Lys Val Val Lys Gln Ser Tyr Glu Phe Ser Asn Ser Asn Lys Asn Leu | | |
| 145 | 150 | 155 |
| Glu Tyr Thr Glu Cys Asp Thr Phe Arg Ser Thr Phe His Ser Lys Ser | | |
| 165 | 170 | 175 |
| Thr Leu Ser Glu Pro Gln Asn Asn Ser Ala Glu Gly Asn Ser His Lys | | |
| 180 | 185 | 190 |
| Tyr Asp Ile Leu Lys Lys Asn Leu Ser Lys Lys Ser Val Ile Lys Ser | | |
| 195 | 200 | 205 |
| Glu Arg Ile Asn Gly Gly Lys Lys Leu Leu Asn Ser Asn Lys Ser Gly | | |
| 210 | 215 | 220 |
| Ala Ala Phe Asn Gln Ser Lys Ser Leu Thr Leu Pro Gln Thr Cys Asn | | |
| 225 | 230 | 235 |
| Arg Glu Lys Ile Tyr Thr Cys Ser Glu Cys Gly Lys Ala Phe Gly Lys | | |
| 245 | 250 | 255 |
| Gln Ser Ile Leu Asn Arg His Trp Arg Ile His Thr Gly Glu Lys Pro | | |
| 260 | 265 | 270 |
| Tyr Glu Cys Arg Glu Cys Gly Lys Thr Phe Ser His Gly Ser Ser Leu | | |
| 275 | 280 | 285 |
| Thr Arg His Gln Ile Ser His Ser Gly Glu Lys Pro Tyr Lys Cys Ile | | |
| 290 | 295 | 300 |
| Glu Cys Gly Lys Ala Phe Ser His Gly Ser Ser Leu Thr Asn His Gln | | |
| 305 | 310 | 315 |
| Ser Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Met Asn Cys Gly Lys | | |
| 325 | 330 | 335 |

Ser Phe Ser Arg Val Ser Leu Leu Ile Gln His Leu Arg Ile His Thr

340

345

350

Gln Glu Lys Arg Tyr Glu Cys Arg Ile Cys Gly Lys Ala Phe Ile His

355

360

365

Ser Ser Ser Leu Ile His His Gln Lys Ser His Thr Gly Glu Lys Pro

370

375

380

Tyr Glu Cys Arg Glu Cys Gly Lys Ala Phe Cys Cys Ser Ser His Leu

385

390

395

400

Thr Gln His Gln Arg Ile His Ser Met Lys Lys Lys Tyr Glu Cys Asn

405

410

415

Lys Cys Leu Lys Val Phe Ser Ser Phe Ser Phe Leu Val Gln His Gln

420

425

430

Ser Ile His Thr Glu Glu Lys Pro Phe Glu Val

435

440

<210> 405

<211> 649

<212> PRT

<213> Homo sapiens

<400> 405

Met Met Trp Gln Cys His Leu Ser Ala Gln Asp Tyr Arg Tyr Tyr Pro

1

5

10

15

Val Asp Gly Tyr Ser Leu Leu Lys Arg Phe Pro Leu His Pro Leu Thr

20

25

30

Gly Pro Arg Cys Pro Val Gln Thr Val Gly Gln Trp Leu Glu Ser Ile

35

40

45

Gly Leu Pro Gln Tyr Glu Asn His Leu Met Ala Asn Gly Phe Asp Asn

50 55 60
Val Gln Phe Met Gly Ser Asn Val Met Glu Asp Gln Asp Leu Leu Glu
65 70 75 80
Ile Gly Ile Leu Asn Ser Gly His Arg Gln Arg Ile Leu Gln Ala Ile
85 90 95
Gln Leu Leu Pro Lys Met Arg Pro Ile Gly His Asp Gly Tyr His Pro
100 105 110
Thr Ser Val Ala Glu Trp Leu Asp Ser Ile Glu Leu Gly Asp Tyr Thr
115 120 125
Lys Ala Phe Leu Ile Asn Gly Tyr Thr Ser Met Asp Leu Leu Lys Lys
130 135 140
Ile Trp Glu Val Glu Leu Ile Asn Glu Trp Asn Ile Thr Lys Leu Ser
145 150 155 160
Ile Glu Tyr Asp Ser Glu Pro Phe Gly Lys Glu Arg Asp Ala Ala Ile
165 170 175
Lys Lys Leu Ala Thr Glu Ala Gly Val Glu Val Ile Val Arg Ile Ser
180 185 190
His Thr Leu Tyr Asp Leu Asp Lys Ile Ile Glu Leu Asn Gly Gly Gln
195 200 205
Pro Pro Leu Thr Tyr Lys Arg Phe Gln Thr Leu Ile Ser Lys Met Glu
210 215 220
Pro Leu Glu Ile Pro Val Glu Thr Ile Thr Ser Glu Val Ile Glu Lys
225 230 235 240
Cys Thr Thr Pro Leu Ser Asp Asp His Asp Glu Lys Tyr Gly Val Pro
245 250 255
Ser Leu Glu Glu Leu Gly Phe Asp Thr Asp Gly Leu Ser Ser Ala Val
260 265 270
Trp Pro Gly Gly Glu Thr Glu Ala Leu Thr Arg Leu Glu Arg His Leu
275 280 285

Glu Arg Lys Ala Trp Val Ala Asn Phe Glu Arg Pro Arg Met Asn Ala
290 295 300
Asn Ser Leu Leu Ala Ser Pro Thr Gly Leu Ser Pro Tyr Leu Arg Phe
305 310 315 320
Gly Cys Leu Ser Cys Arg Leu Phe Tyr Phe Lys Leu Thr Asp Leu Tyr
325 330 335
Lys Lys Val Lys Lys Asn Ser Ser Pro Pro Leu Ser Leu Tyr Gly Gln
340 345 350
Leu Leu Trp Arg Glu Phe Phe Tyr Thr Ala Ala Thr Asn Asn Pro Arg
355 360 365
Phe Asp Lys Met Glu Gly Asn Pro Ile Cys Val Gln Ile Pro Trp Asp
370 375 380
Lys Asn Pro Glu Ala Leu Ala Lys Trp Ala Glu Gly Arg Thr Gly Phe
385 390 395 400
Pro Trp Ile Asp Ala Ile Met Thr Gln Leu Arg Gln Glu Gly Trp Ile
405 410 415
His His Leu Ala Arg His Ala Val Ala Cys Phe Leu Thr Arg Gly Asp
420 425 430
Leu Trp Ile Ser Trp Glu Glu Gly Met Lys Val Phe Glu Glu Leu Leu
435 440 445
Leu Asp Ala Asp Trp Ser Ile Asn Ala Gly Ser Trp Met Trp Leu Ser
450 455 460
Cys Ser Ser Phe Phe Gln Gln Phe Phe His Cys Tyr Cys Pro Val Gly
465 470 475 480
Phe Gly Arg Arg Thr Asp Pro Asn Gly Asp Tyr Ile Arg Arg Tyr Leu
485 490 495
Pro Val Leu Arg Gly Phe Pro Ala Lys Tyr Ile Tyr Asp Pro Trp Asn
500 505 510
Ala Pro Glu Gly Ile Gln Lys Val Ala Lys Cys Leu Ile Gly Val Asn

515 520 525
 Tyr Pro Lys Pro Met Val Asn His Ala Glu Ala Ser Arg Leu Asn Ile
 530 535 540
 Glu Arg Met Lys Gln Ile Tyr Gln Gln Leu Ser Arg Tyr Arg Gly Leu
 545 550 555 560
 Gly Leu Leu Ala Ser Val Pro Ser Asn Pro Asn Gly Asn Gly Gly Phe
 565 570 575
 Met Gly Tyr Ser Ala Glu Asn Ile Pro Gly Cys Ser Ser Ser Gly Ser
 580 585 590
 Cys Ser Gln Gly Ser Gly Ile Leu His Tyr Ala His Gly Asp Ser Gln
 595 600 605
 Gln Thr His Leu Leu Lys Gln Gly Arg Ser Ser Met Gly Thr Gly Leu
 610 615 620
 Ser Gly Gly Lys Arg Pro Ser Gln Glu Glu Asp Thr Gln Ser Ile Gly
 625 630 635 640
 Pro Lys Val Gln Arg Gln Ser Thr Asn
 645

<210> 406

<211> 337

<212> PRT

<213> Homo sapiens

<400> 406

Met Pro Gly Leu Pro Cys Pro Ala Leu Pro Cys Pro Ala Pro Pro Pro
 1 5 10 15
 Ala Pro Ser Cys Leu Ile Ala Met Ala Leu Lys Asn Ser Lys Thr Gly
 20 25 30

Ser Leu Pro Val Ser Glu Ile Tyr Ser Phe Met Lys Glu His Phe Pro
 35 40 45
 Tyr Phe Lys Thr Ala Pro Asp Gly Trp Lys Asn Ser Val Arg His Asn
 50 55 60
 Leu Ser Leu Asn Lys Cys Phe Glu Lys Val Glu Asn Lys Met Ser Gly
 65 70 75 80
 Ser Ser Arg Lys Gly Cys Leu Trp Ala Leu Asn Leu Ala Arg Ile Asp
 85 90 95
 Lys Met Glu Glu Glu Met His Lys Trp Lys Arg Lys Asp Leu Ala Ala
 100 105 110
 Ile His Arg Ser Met Ala Asn Pro Glu Glu Leu Asp Lys Leu Ile Ser
 115 120 125
 Asp Arg Pro Glu Ser Cys Arg Arg Pro Gly Lys Pro Gly Glu Pro Glu
 130 135 140
 Ala Pro Val Leu Thr His Ala Thr Thr Val Ala Val Ala His Gly Cys
 145 150 155 160
 Leu Ala Val Ser Gln Leu Pro Pro Gln Pro Leu Met Thr Leu Ser Leu
 165 170 175
 Gln Ser Val Pro Leu His His Gln Val Gln Pro Gln Ala His Leu Ala
 180 185 190
 Pro Asp Ser Pro Ala Pro Ala Gln Thr Pro Pro Leu His Ala Leu Pro
 195 200 205
 Asp Leu Ser Pro Ser Pro Leu Pro His Pro Ala Met Gly Arg Ala Pro
 210 215 220
 Val Asp Phe Ile Asn Ile Ser Thr Asp Met Asn Thr Glu Val Asp Ala
 225 230 235 240
 Leu Asp Pro Ser Ile Met Asp Phe Ala Leu Gln Gly Asn Leu Trp Glu
 245 250 255
 Glu Met Lys Asp Glu Gly Phe Ser Leu Asp Thr Leu Gly Ala Phe Ala

260 265 270
 Asp Ser Pro Leu Gly Cys Asp Leu Gly Ala Ser Gly Leu Thr Pro Ala
 275 280 285
 Ser Gly Gly Ser Asp Gln Ser Phe Pro Asp Leu Gln Val Thr Gly Leu
 290 295 300
 Tyr Thr Ala Tyr Ser Thr Pro Asp Ser Val Ala Ala Ser Gly Thr Ser
 305 310 315 320
 Ser Ser Ser Gln Tyr Leu Gly Ala Gln Gly Asn Lys Pro Ile Ala Leu
 325 330 335
 Leu

<210> 407

<211> 594

<212> PRT

<213> Homo sapiens

<400> 407

Met Glu Cys Tyr Tyr Ile Val Ile Ser Ser Thr His Leu Ser Asn Gly
 1 5 10 15
 His Phe Arg Asn Ile Lys Gly Val Phe Arg Gly Pro Leu Ser Lys Asn
 20 25 30
 Gly Asn Lys Thr Leu Asp Tyr Ala Glu Lys Glu Asn Thr Ile Ala Lys
 35 40 45
 Ala Leu Glu Asp Leu Lys Ala Asn Phe Tyr Cys Glu Leu Cys Asp Lys
 50 55 60
 Gln Tyr Tyr Lys His Gln Glu Phe Asp Asn His Ile Asn Ser Tyr Asp
 65 70 75 80

His Ala His Lys Gln Arg Leu Lys Glu Leu Lys Gln Arg Glu Phe Ala
 85 90 95
 Arg Asn Val Ala Ser Lys Ser Arg Lys Asp Glu Arg Lys Gln Glu Lys
 100 105 110
 Ala Leu Gln Arg Leu His Lys Leu Ala Glu Leu Arg Lys Glu Thr Val
 115 120 125
 Cys Ala Pro Gly Ser Gly Pro Met Phe Lys Ser Thr Thr Val Thr Val
 130 135 140
 Arg Glu Asn Cys Asn Glu Ile Ser Gln Arg Val Val Val Asp Ser Val
 145 150 155 160
 Asn Asn Gln Gln Asp Phe Lys Tyr Thr Leu Ile His Ser Glu Glu Asn
 165 170 175
 Thr Lys Asp Ala Thr Thr Val Ala Glu Asp Pro Glu Ser Ala Asn Asn
 180 185 190
 Tyr Thr Ala Lys Asn Asn Gln Val Gly Asp Gln Ala Gln Gly Ile His
 195 200 205
 Arg His Lys Ile Gly Phe Ser Phe Ala Phe Pro Lys Lys Ala Ser Val
 210 215 220
 Lys Leu Glu Ser Ser Ala Ala Ala Phe Ser Glu Tyr Ser Asp Asp Ala
 225 230 235 240
 Ser Val Gly Lys Gly Phe Ser Arg Lys Ser Arg Phe Val Pro Ser Ala
 245 250 255
 Cys His Leu Gln Leu Ser Ser Pro Thr Asp Val Leu Leu Ser Ser Glu
 260 265 270
 Glu Lys Thr Asn Ser Phe His Pro Pro Glu Ala Met Cys Arg Asp Lys
 275 280 285
 Glu Thr Val Gln Thr Gln Glu Ile Lys Glu Val Ser Ser Glu Lys Asp
 290 295 300
 Ala Leu Leu Leu Pro Ser Phe Cys Lys Phe Gln Leu Gln Leu Ser Ser

305 310 315 320
Asp Ala Asp Asn Cys Gln Asn Ser Val Pro Leu Ala Asp Gln Ile Pro
 325 330 335
Leu Glu Ser Val Val Ile Asn Glu Asp Ile Pro Val Ser Gly Asn Ser
 340 345 350
Phe Glu Leu Leu Gly Asn Lys Ser Thr Val Leu Asp Met Ser Asn Asp
 355 360 365
Cys Ile Ser Val Gln Ala Thr Thr Glu Glu Asn Val Lys His Asn Glu
 370 375 380
Ala Ser Thr Thr Glu Val Glu Asn Lys Asn Gly Pro Glu Thr Leu Ala
385 390 395 400
Pro Ser Asn Thr Glu Glu Val Asn Ile Thr Ile His Lys Lys Thr Asn
 405 410 415
Phe Cys Lys Arg Gln Cys Glu Pro Phe Val Pro Val Leu Asn Lys His
 420 425 430
Arg Ser Thr Val Leu Gln Trp Pro Ser Glu Met Leu Val Tyr Thr Thr
 435 440 445
Thr Lys Pro Ser Ile Ser Tyr Ser Cys Asn Pro Leu Cys Phe Asp Phe
 450 455 460
Lys Ser Thr Lys Val Asn Asn Asn Leu Asp Lys Asn Lys Pro Asp Leu
465 470 475 480
Lys Asp Leu Cys Ser Gln Gln Lys Gln Glu Asp Ile Cys Met Gly Pro
 485 490 495
Leu Ser Asp Tyr Lys Asp Val Ser Thr Glu Gly Leu Thr Asp Tyr Glu
 500 505 510
Ile Gly Ser Ser Lys Asn Lys Cys Ser Gln Val Thr Pro Leu Leu Ala
 515 520 525
Asp Asp Ile Leu Ser Ser Ser Cys Asp Ser Gly Lys Asn Lys Asn Thr
 530 535 540

Gly Gln Arg Tyr Lys Asn Ile Ser Cys Lys Ile Arg Glu Thr Glu Lys
 545 550 555 560
 Tyr Asn Phe Thr Lys Ser Gln Ile Lys Gln Asp Thr Leu Asp Glu Lys
 565 570 575
 Tyr Asn Lys Ile Arg Leu Lys Glu Thr His Glu Tyr Trp Phe His Lys
 580 585 590
 Ser Arg

<210> 408

<211> 118

<212> PRT

<213> Homo sapiens

<400> 408

Met Ile Thr Phe Tyr Phe Leu Phe Leu Phe Ser Phe Leu Ser Phe Phe
 1 5 10 15
 Phe Phe Phe Phe Phe Glu Thr Glu Phe Cys Ser Ser Cys Pro Gly Trp
 20 25 30
 Ser Asn Gly Thr Ile Leu Ala His Arg Asn Leu His Leu Pro Gly Ser
 35 40 45
 Ser Asp Ser Pro Pro Ser Ala Phe Pro Ser Ser Trp Asp Tyr Arg His
 50 55 60
 Ala Pro Pro Ser Pro Ala Asn Phe Val Phe Leu Val Asp Met Gly Leu
 65 70 75 80
 Leu His Val Gly Gln Ala Gly Leu Glu Leu Pro Thr Ser Gly Asp Pro
 85 90 95
 Pro Thr Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Val Ser His Cys

100 105 110
 Ala Arg Pro Leu Phe Ser
 115

<210> 409

<211> 491

<212> PRT

<213> Homo sapiens

<400> 409

Met Ala Tyr Leu Tyr Ser Ser Asp Ala Phe Leu Glu Gly Tyr Val Gln
 1 5 10 15
 Gln Phe Leu Tyr Thr Phe Arg Tyr Phe Cys Thr Pro His Asp Phe Leu
 20 25 30
 His Phe Leu Leu Asp Arg Ile Asn Ser Thr Leu Thr Arg Ala His Gln
 35 40 45
 Asp Pro Thr Ser Thr Phe Thr Lys Ile Tyr Arg Arg Ser Leu Cys Val
 50 55 60
 Leu Gln Ala Trp Val Glu Asp Cys Tyr Ala Val Asp Phe Pro Arg Asn
 65 70 75 80
 Ser Gly Leu Leu Gly Lys Leu Glu Asp Phe Ile Ser Ser Lys Ile Leu
 85 90 95
 Pro Leu Asp Gly Ser Ala Lys His Leu Leu Gly Leu Leu Glu Val Gly
 100 105 110
 Met Asp Arg Arg Ala Glu Gly Asn Pro Arg Gly Thr Asp Leu Glu Asn
 115 120 125
 Pro Arg Glu Ala Glu Glu Asp Ala Arg Pro Phe Asn Ala Leu Cys Lys
 130 135 140

Arg Leu Ser Glu Asp Gly Ile Ser Arg Lys Ser Phe Pro Trp Arg Leu
145 150 155 160
Pro Arg Gly Asn Gly Leu Val Leu Pro Pro His Lys Glu Arg Pro Tyr
165 170 175
Thr Ile Ala Ala Ala Leu Pro Lys Pro Cys Phe Leu Glu Asp Phe Tyr
180 185 190
Gly Pro Cys Ala Lys Thr Ser Glu Lys Gly Pro Tyr Phe Leu Thr Glu
195 200 205
Tyr Ser Thr His Gln Leu Phe Ser Gln Leu Thr Leu Leu Gln Gln Glu
210 215 220
Leu Phe Gln Lys Cys His Pro Val His Phe Leu Asn Ser Arg Ala Leu
225 230 235 240
Gly Val Met Asp Lys Ser Thr Ala Ile Pro Lys Ala Ser Ser Ser Glu
245 250 255
Ser Leu Ser Ala Lys Thr Cys Ser Leu Phe Leu Pro Asn Tyr Val Gln
260 265 270
Asp Lys Tyr Leu Leu Gln Leu Leu Arg Asn Ala Asp Asp Val Ser Thr
275 280 285
Trp Val Ala Ala Glu Ile Val Thr Ser His Thr Ser Lys Leu Gln Val
290 295 300
Asn Leu Leu Ser Lys Phe Leu Leu Ile Ala Lys Ser Cys Tyr Glu Gln
305 310 315 320
Arg Asn Phe Ala Thr Ala Met Gln Ile Leu Ser Gly Leu Glu His Leu
325 330 335
Ala Val Arg Gln Ser Pro Ala Trp Arg Ile Leu Pro Ala Lys Ile Ala
340 345 350
Glu Val Met Glu Glu Leu Lys Ala Val Glu Val Phe Leu Lys Ser Asp
355 360 365
Ser Leu Cys Leu Met Glu Gly Arg Arg Phe Arg Ala Gln Pro Thr Leu

370 375 380
 Pro Ser Ala His Leu Leu Ala Met His Ile Gln Gln Leu Glu Thr Gly
 385 390 395 400
 Gly Phe Thr Met Thr Asn Gly Ala His Arg Trp Ser Lys Leu Arg Asn
 405 410 415
 Ile Ala Lys Val Val Ser Gln Val His Ala Phe Gln Glu Asn Pro Tyr
 420 425 430
 Thr Phe Ser Pro Asp Pro Lys Leu Gln Ser Tyr Leu Lys Gln Arg Ile
 435 440 445
 Ala Arg Phe Ser Gly Ala Asp Ile Ser Thr Leu Ala Ala Asp Ser Arg
 450 455 460
 Ala Asn Phe His Gln Val Ser Ser Glu Lys His Ser Arg Lys Ile Gln
 465 470 475 480
 Asp Lys Leu Arg Arg Met Lys Ala Thr Phe Gln
 485 490

<210> 410

<211> 415

<212> PRT

<213> Homo sapiens

<400> 410

Met Val Ala Tyr Ser Val Gln Val Leu Ala Val Phe Ile Ser Cys Ala
 1 5 10 15
 Ile Leu Thr Leu Ala Met Lys Ile Ala Trp Ile Phe Gly Leu Asn Ser
 20 25 30
 Val Gln Asn Ile Thr Ala Asn Leu Ser Val Asp Gly Ser Thr Ser Gly
 35 40 45

Asn Pro Ile Gln Lys Trp Lys Arg Lys Ile Asp Ala Asn Cys Thr Ala
 50 55 60
 Arg Leu Arg Thr Leu Asn Phe Phe Phe Ala Met Ser Gly Lys Val Lys
 65 70 75 80
 Asp Gly Thr Pro Cys Ser Pro Asn Lys Asn Asp Val Cys Ile Asp Gly
 85 90 95
 Val Cys Glu Leu Val Gly Cys Asp His Glu Leu Gly Ser Lys Ala Val
 100 105 110
 Ser Asp Ala Cys Gly Val Cys Lys Gly Asp Asn Ser Thr Cys Lys Phe
 115 120 125
 Tyr Lys Gly Leu Tyr Leu Asn Gln His Lys Ala Asn Glu Tyr Tyr Pro
 130 135 140
 Val Val Leu Ile Pro Ala Gly Ala Arg Ser Ile Glu Ile Gln Glu Leu
 145 150 155 160
 Gln Val Ser Ser Ser Tyr Leu Ala Val Arg Ser Leu Ser Gln Lys His
 165 170 175
 Tyr Leu Thr Gly Gly Trp Ser Ile Asp Trp Pro Gly Glu Phe Pro Phe
 180 185 190
 Ala Gly Thr Thr Phe Glu Tyr Gln Arg Ser Phe Asn Arg Pro Glu Arg
 195 200 205
 Leu Tyr Ala Pro Gly Pro Thr Asn Glu Thr Leu Val Phe Glu Ile Leu
 210 215 220
 Met Gln Gly Lys Asn Pro Gly Ile Ala Trp Lys Tyr Ala Leu Pro Lys
 225 230 235 240
 Val Met Asn Gly Thr Pro Pro Ala Thr Lys Arg Pro Ala Tyr Thr Trp
 245 250 255
 Ser Ile Val Gln Ser Glu Cys Ser Val Ser Cys Gly Gly Gly Tyr Ile
 260 265 270
 Asn Val Lys Ala Ile Cys Leu Arg Asp Gln Asn Thr Gln Val Asn Ser

275 280 285
 Ser Phe Cys Ser Ala Lys Thr Lys Pro Val Thr Glu Pro Lys Ile Cys
 290 295 300
 Asn Arg Arg Ala Cys Pro Ala His Pro Val Tyr Asn Met Val Ala Gly
 305 310 315 320
 Trp Tyr Ser Leu Pro Trp Gln Gln Cys Thr Val Thr Cys Gly Gly Gly
 325 330 335
 Val Gln Thr Arg Ser Val His Cys Val Gln Gln Gly Arg Pro Ser Ser
 340 345 350
 Ser Cys Leu Leu His Gln Lys Pro Pro Val Leu Arg Ala Cys Asn Thr
 355 360 365
 Asn Phe Cys Pro Ala Pro Glu Lys Arg Glu Asp Pro Ser Cys Val Asp
 370 375 380
 Phe Phe Asn Trp Cys His Leu Val Pro Gln His Gly Val Cys Asn His
 385 390 395 400
 Lys Phe Tyr Gly Lys Gln Cys Cys Lys Ser Cys Thr Arg Lys Ile
 405 410 415

<210> 411

<211> 974

<212> PRT

<213> Homo sapiens

<400> 411

Met Arg Arg Ala Gly Ile Gly Glu Asp Ser Arg Leu Gly Leu Gln Ala
 1 5 10 15
 Gln Pro Gly Ala Glu Pro Ser Pro Gly Arg Ala Gly Thr Glu Arg Ser
 20 25 30

Leu Gly Gly Ala Gln Gly Pro Gly Gln Pro Cys Ser Cys Pro Gly Ala
 35 40 45
 Met Ala Ser Ala Val Arg Gly Ser Arg Pro Trp Pro Arg Leu Gly Leu
 50 55 60
 Gln Leu Gln Phe Ala Ala Leu Leu Leu Gly Thr Leu Ser Pro Gln Val
 65 70 75 80
 His Thr Leu Arg Pro Glu Asn Leu Leu Leu Val Ser Thr Leu Asp Gly
 85 90 95
 Ser Leu His Ala Leu Ser Lys Gln Thr Gly Asp Leu Lys Trp Thr Leu
 100 105 110
 Arg Asp Asp Pro Val Ile Glu Gly Pro Met Tyr Val Thr Glu Met Ala
 115 120 125
 Phe Leu Ser Asp Pro Ala Asp Gly Ser Leu Tyr Ile Leu Gly Thr Gln
 130 135 140
 Lys Gln Gln Gly Leu Met Lys Leu Pro Phe Thr Ile Pro Glu Leu Val
 145 150 155 160
 His Ala Ser Pro Cys Arg Ser Ser Asp Gly Val Phe Tyr Thr Gly Arg
 165 170 175
 Lys Gln Asp Ala Trp Phe Val Val Asp Pro Glu Ser Gly Glu Thr Gln
 180 185 190
 Met Thr Leu Thr Thr Glu Gly Pro Ser Thr Pro Arg Leu Tyr Ile Gly
 195 200 205
 Arg Thr Gln Tyr Thr Val Thr Met His Asp Pro Arg Ala Pro Ala Leu
 210 215 220
 Arg Trp Asn Thr Thr Tyr Arg Arg Tyr Ser Ala Pro Pro Met Asp Gly
 225 230 235 240
 Ser Pro Gly Lys Tyr Met Ser His Leu Ala Ser Cys Gly Met Gly Leu
 245 250 255
 Leu Leu Thr Val Asp Pro Gly Ser Gly Thr Val Leu Trp Thr Gln Asp

260 265 270
Leu Gly Val Pro Val Met Gly Val Tyr Thr Trp His Gln Asp Gly Leu
275 280 285
Arg Gln Leu Pro His Leu Thr Leu Ala Arg Asp Thr Leu His Phe Leu
290 295 300
Ala Leu Arg Trp Gly His Ile Arg Leu Pro Ala Ser Gly Pro Arg Asp
305 310 315 320
Thr Ala Thr Leu Phe Ser Thr Leu Asp Thr Gln Leu Leu Met Thr Leu
325 330 335
Tyr Val Gly Lys Asp Glu Thr Gly Phe Tyr Val Ser Lys Ala Leu Val
340 345 350
His Thr Gly Val Ala Leu Val Pro Arg Gly Leu Thr Leu Ala Pro Ala
355 360 365
Asp Gly Pro Thr Thr Asp Glu Val Thr Leu Gln Val Ser Gly Glu Arg
370 375 380
Glu Gly Ser Pro Ser Thr Ala Val Arg Tyr Pro Ser Gly Ser Val Ala
385 390 395 400
Leu Pro Ser Gln Trp Leu Leu Ile Gly His His Glu Leu Pro Pro Val
405 410 415
Leu His Thr Thr Met Leu Arg Val His Pro Thr Leu Gly Ser Gly Thr
420 425 430
Ala Glu Thr Arg Pro Pro Glu Asn Thr Gln Ala Pro Ala Phe Phe Leu
435 440 445
Glu Leu Leu Ser Leu Ser Arg Glu Lys Leu Trp Asp Ser Glu Leu His
450 455 460
Pro Glu Glu Lys Thr Pro Asp Ser Tyr Leu Gly Leu Gly Pro Gln Asp
465 470 475 480
Leu Leu Ala Ala Ser Leu Thr Ala Val Leu Leu Gly Gly Trp Ile Leu
485 490 495

Phe Val Met Arg Gln Gln Gln Pro Gln Val Val Glu Lys Gln Gln Glu
500 505 510
Thr Pro Leu Ala Pro Ala Asp Phe Ala His Ile Ser Gln Asp Ala Gln
515 520 525
Ser Leu His Ser Gly Ala Ser Arg Arg Ser Gln Lys Arg Leu Gln Ser
530 535 540
Pro Ser Lys Gln Ala Gln Pro Leu Asp Asp Pro Glu Ala Glu Gln Leu
545 550 555 560
Thr Val Val Gly Lys Ile Ser Phe Asn Pro Lys Asp Val Leu Gly Arg
565 570 575
Gly Ala Gly Gly Thr Phe Val Phe Arg Gly Gln Phe Glu Gly Arg Ala
580 585 590
Val Ala Val Lys Arg Leu Leu Arg Glu Cys Phe Gly Leu Val Arg Arg
595 600 605
Glu Val Gln Leu Leu Gln Glu Ser Asp Arg His Pro Asn Val Leu Arg
610 615 620
Tyr Phe Cys Thr Glu Arg Gly Pro Gln Phe His Tyr Ile Ala Leu Glu
625 630 635 640
Leu Cys Arg Ala Ser Leu Gln Glu Tyr Val Glu Asn Pro Asp Leu Asp
645 650 655
Arg Gly Gly Leu Glu Pro Glu Val Val Leu Gln Gln Leu Met Ser Gly
660 665 670
Leu Ala His Leu His Ser Leu His Ile Val His Arg Asp Leu Lys Pro
675 680 685
Gly Asn Ile Leu Ile Thr Gly Pro Asp Ser Gln Gly Leu Gly Arg Val
690 695 700
Val Leu Ser Asp Phe Gly Leu Cys Lys Lys Leu Pro Ala Gly Arg Cys
705 710 715 720
Ser Phe Ser Leu His Ser Gly Ile Pro Gly Thr Glu Gly Trp Met Ala

725 730 735
Pro Glu Leu Leu Gln Leu Leu Pro Pro Asp Ser Pro Thr Ser Ala Val
740 745 750
Asp Ile Phe Ser Ala Gly Cys Val Phe Tyr Tyr Val Leu Ser Gly Gly
755 760 765
Ser His Pro Phe Gly Asp Ser Leu Tyr Arg Gln Ala Asn Ile Leu Thr
770 775 780
Gly Ala Pro Cys Leu Ala His Leu Glu Glu Glu Val His Asp Lys Val
785 790 795 800
Val Ala Arg Asp Leu Val Gly Ala Met Leu Ser Pro Leu Pro Gln Pro
805 810 815
Arg Pro Ser Ala Pro Gln Val Leu Ala His Pro Phe Phe Trp Ser Arg
820 825 830
Ala Lys Gln Leu Gln Phe Phe Gln Asp Val Ser Asp Trp Leu Glu Lys
835 840 845
Glu Ser Glu Gln Glu Pro Leu Val Arg Ala Leu Glu Ala Gly Gly Cys
850 855 860
Ala Val Val Arg Asp Asn Trp His Glu His Ile Ser Met Pro Leu Gln
865 870 875 880
Thr Asp Leu Arg Lys Phe Arg Ser Tyr Lys Gly Thr Ser Val Arg Asp
885 890 895
Leu Leu Arg Ala Val Arg Asn Lys Lys His His Tyr Arg Glu Leu Pro
900 905 910
Val Glu Val Arg Gln Ala Leu Gly Gln Val Pro Asp Gly Phe Val Gln
915 920 925
Tyr Phe Thr Asn Arg Phe Pro Arg Leu Leu Leu His Thr His Arg Ala
930 935 940
Met Arg Ser Cys Ala Ser Glu Ser Leu Phe Leu Pro Tyr Tyr Pro Pro
945 950 955 960

Asp Ser Glu Ala Arg Arg Pro Cys Pro Gly Ala Thr Gly Arg

965

970

<210> 412

<211> 794

<212> PRT

<213> Homo sapiens

<400> 412

Met Glu Gly Ser Leu Ala Gly Ser Leu Ala Ala Pro Asp Arg Pro Gln

1

5

10

15

Gly Pro Glu Arg Leu Pro Gly Pro Ala Pro Arg Glu Asn Ile Glu Gly

20

25

30

Gly Ala Glu Ala Ala Glu Gly Glu Gly Gly Ile Phe Arg Ser Thr Arg

35

40

45

Tyr Leu Pro Val Thr Lys Glu Gly Pro Arg Asp Ile Leu Asp Gly Arg

50

55

60

Gly Gly Ile Ser Val Ala Asn Phe Asp Pro Gly Thr Phe Ser Leu Met

65

70

75

80

Arg Cys Asp Phe Cys Gly Ala Gly Phe Asp Thr Arg Ala Gly Leu Ser

85

90

95

Ser His Ala Arg Ala His Leu Arg Asp Phe Gly Ile Thr Asn Trp Glu

100

105

110

Leu Thr Val Ser Pro Ile Asn Ile Leu Gln Glu Leu Leu Ala Thr Ser

115

120

125

Ala Ala Glu Gln Pro Pro Ser Pro Leu Gly Arg Glu Pro Gly Gly Pro

130

135

140

Pro Gly Ser Phe Leu Thr Ser Arg Arg Pro Arg Leu Pro Leu Thr Val

145 150 155 160
Pro Phe Pro Pro Thr Trp Ala Glu Asp Pro Gly Pro Ala Tyr Gly Asp
 165 170 175
Ala Ser Gly Pro Glu Pro Ala Arg Asp Ile Arg Cys Glu Phe Cys Gly
 180 185 190
Glu Phe Phe Glu Asn Arg Lys Gly Leu Ser Ser His Ala Arg Ser His
 195 200 205
Leu Arg Gln Met Gly Val Thr Glu Trp Tyr Val Asn Gly Ser Pro Ile
 210 215 220
Asp Thr Leu Arg Glu Ile Leu Lys Arg Arg Thr Gln Ser Arg Pro Gly
225 230 235 240
Gly Pro Pro Asn Pro Pro Gly Pro Ser Pro Lys Ala Leu Ala Lys Met
 245 250 255
Met Gly Gly Ala Gly Pro Gly Ser Ser Leu Glu Ala Arg Ser Pro Ser
 260 265 270
Asp Leu His Ile Ser Pro Leu Ala Lys Lys Leu Pro Pro Pro Pro Gly
 275 280 285
Ser Pro Leu Gly His Ser Pro Thr Ala Ser Pro Pro Pro Thr Ala Arg
 290 295 300
Lys Met Phe Pro Gly Leu Ala Ala Pro Ser Leu Pro Lys Lys Leu Lys
305 310 315 320
Pro Glu Gln Ile Arg Val Glu Ile Lys Arg Glu Met Leu Pro Gly Ala
 325 330 335
Leu His Gly Glu Leu His Pro Ser Glu Gly Pro Trp Gly Ala Pro Arg
 340 345 350
Glu Asp Met Thr Pro Leu Asn Leu Ser Ser Arg Ala Glu Pro Val Arg
 355 360 365
Asp Ile Arg Cys Glu Phe Cys Gly Glu Phe Phe Glu Asn Arg Lys Gly
 370 375 380

Leu Ser Ser His Ala Arg Ser His Leu Arg Gln Met Gly Val Thr Glu
385 390 395 400
Trp Ser Val Asn Gly Ser Pro Ile Asp Thr Leu Arg Glu Ile Leu Lys
405 410 415
Lys Lys Ser Lys Pro Cys Leu Ile Lys Lys Glu Pro Pro Ala Gly Asp
420 425 430
Leu Ala Pro Ala Leu Ala Glu Asp Gly Pro Pro Thr Val Ala Pro Gly
435 440 445
Pro Val Gln Ser Pro Leu Pro Leu Ser Pro Leu Ala Gly Arg Pro Gly
450 455 460
Lys Pro Gly Ala Gly Pro Ala Gln Val Pro Arg Glu Leu Ser Leu Thr
465 470 475 480
Pro Ile Thr Gly Ala Lys Pro Ser Ala Thr Gly Tyr Leu Gly Ser Val
485 490 495
Ala Ala Lys Arg Pro Leu Gln Glu Asp Arg Leu Leu Pro Ala Glu Val
500 505 510
Lys Ala Lys Ala Tyr Ile Gln Thr Glu Leu Pro Phe Lys Ala Lys Thr
515 520 525
Leu His Glu Lys Thr Ser His Ser Ser Thr Glu Ala Cys Cys Glu Leu
530 535 540
Cys Gly Leu Tyr Phe Glu Asn Arg Lys Ala Leu Ala Ser His Ala Arg
545 550 555 560
Ala His Leu Arg Gln Phe Gly Val Thr Glu Trp Cys Val Asn Gly Ser
565 570 575
Pro Ile Glu Thr Leu Ser Glu Trp Ile Lys His Arg Pro Gln Lys Val
580 585 590
Gly Ala Tyr Arg Ser Tyr Ile Gln Gly Gly Arg Pro Phe Thr Lys Lys
595 600 605
Phe Arg Ser Ala Gly His Gly Arg Asp Ser Asp Lys Arg Pro Ser Leu

610 615 620
Gly Leu Ala Pro Gly Gly Leu Ala Val Val Gly Arg Ser Ala Gly Gly
625 630 635 640
Glu Pro Gly Pro Glu Ala Gly Arg Ala Ala Asp Gly Gly Glu Arg Pro
 645 650 655
Leu Ala Ala Ser Pro Pro Gly Thr Val Lys Ala Glu Glu His Gln Arg
 660 665 670
Gln Asn Ile Asn Lys Phe Glu Arg Arg Gln Ala Arg Pro Pro Asp Ala
 675 680 685
Ser Ala Ala Arg Gly Gly Glu Asp Thr Asn Asp Leu Gln Gln Lys Leu
 690 695 700
Glu Glu Val Arg Gln Pro Pro Pro Arg Val Arg Pro Val Pro Ser Leu
705 710 715 720
Val Pro Arg Pro Pro Gln Thr Ser Leu Val Lys Phe Val Gly Asn Ile
 725 730 735
Tyr Thr Leu Lys Cys Arg Phe Cys Glu Val Glu Phe Gln Gly Pro Leu
 740 745 750
Ser Ile Gln Glu Glu Trp Val Arg His Leu Gln Arg His Ile Leu Glu
 755 760 765
Met Asn Phe Ser Lys Ala Asp Pro Pro Pro Glu Glu Ser Gln Ala Pro
 770 775 780
Gln Ala Gln Thr Ala Ala Ala Glu Ala Pro
785 790

<210> 413

<211> 692

<212> PRT

<213> Homo sapiens

<400> 413

Met Lys Glu Phe Leu Ser Thr Ala Gln Gly Asn Arg Glu Val Phe His
 1 5 10 15
 Ala Gly Thr Leu Gln Ile His Glu Ser His His Asn Gly Asp Phe Cys
 20 25 30
 Tyr Gln Asp Val Asp Lys Asp Ile His Asp Tyr Glu Phe Gln Trp Gln
 35 40 45
 Glu Asp Glu Arg Asn Gly His Glu Ala Pro Met Thr Lys Ile Lys Lys
 50 55 60
 Leu Thr Gly Ser Thr Glu Arg Tyr Asp Gln Ser His Ala Arg Asn Lys
 65 70 75 80
 Pro Ile Lys Asp Gln Leu Gly Ser Ser Phe His Ser His Leu Pro Glu
 85 90 95
 Met His Ile Phe Gln Thr Glu Glu Lys Ile Asp Asn Gln Val Val Lys
 100 105 110
 Ser Ile His Asp Ala Ser Leu Val Ser Thr Ala Gln Arg Ile Ser Cys
 115 120 125
 Arg Pro Lys Thr His Ile Ser Asn Asn His Gly Asn Asn Phe Trp Asn
 130 135 140
 Ser Ser Leu Leu Thr Gln Lys Gln Glu Val His Met Arg Glu Lys Ser
 145 150 155 160
 Phe Gln Cys Asn Glu Ser Gly Lys Ala Phe Asn Tyr Ser Ser Leu Leu
 165 170 175
 Arg Lys His Gln Ile Ile His Leu Ala Asp Lys Tyr Lys Cys Asp Val
 180 185 190
 Cys Gly Lys Leu Phe Asn Gln Lys Arg Asn Leu Ala Cys His Arg Arg
 195 200 205
 Cys His Thr Gly Glu Asn Pro Tyr Lys Cys Asn Glu Cys Gly Lys Thr

| | | | |
|---|-----|-----|-----|
| 210 | 215 | 220 | |
| Phe Ser Gln Thr Ser Ser Leu Thr Cys His Arg Arg Leu His Thr Gly | | | |
| 225 | 230 | 235 | 240 |
| Glu Lys Pro Tyr Lys Cys Glu Glu Cys Asp Lys Ala Phe His Phe Lys | | | |
| 245 | 250 | 255 | |
| Ser Ile Leu Glu Arg His Ser Ile Ile His Thr Glu Glu Lys Pro Tyr | | | |
| 260 | 265 | 270 | |
| Lys Cys Asn Glu Cys Gly Lys Thr Phe Arg Gln Lys Ser Ile Leu Thr | | | |
| 275 | 280 | 285 | |
| Arg His His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu | | | |
| 290 | 295 | 300 | |
| Cys Gly Lys Thr Phe Ser His Lys Ser Ser Leu Thr Cys His His Arg | | | |
| 305 | 310 | 315 | 320 |
| Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Thr | | | |
| 325 | 330 | 335 | |
| Phe Ser His Lys Ser Ser Leu Thr Cys His Arg Arg Leu His Thr Gly | | | |
| 340 | 345 | 350 | |
| Glu Lys Pro Tyr Lys Cys Glu Glu Cys Asp Lys Ala Tyr Ser Phe Arg | | | |
| 355 | 360 | 365 | |
| Ser Asn Phe Glu Ile His Arg Lys Ile His Thr Glu Asp Asn Ala Tyr | | | |
| 370 | 375 | 380 | |
| Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser Arg Thr Ser Ser Leu Thr | | | |
| 385 | 390 | 395 | 400 |
| Cys His Arg Arg Arg His Thr Gly Glu Gln Pro Tyr Lys Cys Glu Glu | | | |
| 405 | 410 | 415 | |
| Cys Asp Lys Ala Phe Arg Phe Lys Ser Asn Leu Glu Arg His Arg Arg | | | |
| 420 | 425 | 430 | |
| Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Thr | | | |
| 435 | 440 | 445 | |

Phe Ser Arg Lys Ser Tyr Leu Thr Cys His His Arg Leu His Thr Gly
 450 455 460
 Glu Lys Ala Tyr Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser Trp Lys
 465 470 475 480
 Ser Ser Leu Thr Cys His Arg Arg Leu His Ser Gly Glu Lys Pro Tyr
 485 490 495
 Lys Cys Lys Glu Cys Gly Lys Thr Phe Asn Gln Gln Leu Thr Leu Lys
 500 505 510
 Arg His Arg Arg Leu His Ser Gly Glu Asn Pro Tyr Lys Cys Glu Asp
 515 520 525
 Ser Asp Lys Ala Tyr Ser Phe Lys Ser Asn Leu Glu Ile His Gln Lys
 530 535 540
 Ile His Thr Glu Glu Asn Pro Tyr Lys Cys Asn Glu Cys Gly Lys Thr
 545 550 555 560
 Phe Ser Arg Thr Ser Ser Leu Thr Cys His Arg Arg Leu His Thr Gly
 565 570 575
 Glu Lys Pro Tyr Lys Cys Glu Glu Cys Asp Lys Ala Phe Arg Val Lys
 580 585 590
 Ser Asn Leu Glu Gly His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr
 595 600 605
 Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser Arg Lys Ser Tyr Phe Ile
 610 615 620
 Cys His His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu
 625 630 635 640
 Cys Gly Lys Asn Phe Ser Gln Lys Ser Ser Leu Ile Cys His His Arg
 645 650 655
 Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Thr
 660 665 670
 Phe Ser Gln Lys Ser Asn Leu Thr Cys His Arg Arg Leu His Thr Gly

675
Glu Lys Gln Val

680

685

690

<210> 414

<211> 872

<212> PRT

<213> Homo sapiens

<400> 414

Met Gly Ile Val Trp Ile Leu Met Ser Val Leu Pro Trp Trp Gly Arg
1 5 10 15

Cys Ala Asp Leu Ala Ile Ala Ser Thr Gln Leu Val Pro Ser Thr Ala
20 25 30

Ser Ala Arg Met Ala Leu Ser Ser Gln Leu Met Gly Arg Thr Val Trp
35 40 45

Thr Pro Met Ser Ala Ser Ala Leu Gln Glu Pro Ala Tyr Gln Ala Leu
50 55 60

Ala Arg Thr Ser Arg Ala Pro Ser Ala Ala Ser Val Pro Met Ala Ser
65 70 75 80

Arg Cys Arg Val Thr Thr Ala Leu Ile Ser Thr Ser Ala Gln Arg Ser
85 90 95

Pro Thr Ser Ala Ser Leu Ala Pro Val Pro Thr Ala Leu Gly Ala Ser
100 105 110

Ser Ala Ser Ala His Leu Ala Leu Ser Ser Leu Thr Met Gly Thr Val
115 120 125

Ala Leu Thr His Gly Arg Val Ser Ala Ser Pro Val Leu Arg Leu Gly
130 135 140

Ser Ala Arg Cys Pro Lys Leu Ser Thr Pro Pro Arg Pro Ala Ala Ala
145 150 155 160
Ala Val Arg Gly Leu Gly Arg Ala Gly Glu Thr Pro Ala Asn Cys Val
165 170 175
Ser Arg Arg Ala Val Pro Gly Pro Asp Asp Ser Arg Glu Asp Val Asn
180 185 190
Glu Cys Ala Glu Asn Pro Gly Val Cys Thr Asn Gly Val Cys Val Asn
195 200 205
Thr Asp Gly Ser Phe Arg Cys Glu Cys Pro Phe Gly Tyr Ser Leu Asp
210 215 220
Phe Thr Gly Ile Asn Cys Val Asp Thr Asp Glu Cys Ser Val Gly His
225 230 235 240
Pro Cys Gly Gln Gly Thr Cys Thr Asn Val Ile Gly Gly Phe Glu Cys
245 250 255
Ala Cys Ala Asp Gly Phe Glu Pro Gly Leu Met Met Thr Cys Glu Asp
260 265 270
Ile Asp Glu Cys Ser Leu Asn Pro Leu Leu Cys Ala Phe Arg Cys His
275 280 285
Asn Thr Glu Gly Ser Tyr Leu Cys Thr Cys Pro Ala Gly Tyr Thr Leu
290 295 300
Arg Glu Asp Gly Ala Met Cys Arg Asp Val Asp Glu Cys Ala Asp Gly
305 310 315 320
Gln Gln Asp Cys His Ala Arg Gly Met Glu Cys Lys Asn Leu Ile Gly
325 330 335
Thr Phe Ala Cys Val Cys Pro Pro Gly Met Arg Pro Leu Pro Gly Ser
340 345 350
Gly Glu Gly Cys Thr Asp Asp Asn Glu Cys His Ala Gln Pro Asp Leu
355 360 365
Cys Val Asn Gly Arg Cys Val Asn Thr Ala Gly Ser Phe Arg Cys Asp

| | | |
|---|-----|-----|
| 370 | 375 | 380 |
| Cys Asp Glu Gly Phe Gln Pro Ser Pro Thr Leu Thr Glu Cys His Asp | | |
| 385 | 390 | 395 |
| Ile Arg Gln Gly Pro Cys Phe Ala Glu Val Leu Gln Thr Met Cys Arg | | 400 |
| | 405 | 410 |
| Ser Leu Ser Ser Ser Ser Glu Ala Val Thr Arg Ala Glu Cys Cys Cys | | 415 |
| | 420 | 425 |
| Gly Gly Gly Arg Gly Trp Gly Pro Arg Cys Glu Leu Cys Pro Leu Pro | | 430 |
| | 435 | 440 |
| Gly Thr Ser Ala Tyr Arg Lys Leu Cys Pro His Gly Ser Gly Tyr Thr | | 445 |
| | 450 | 455 |
| Ala Glu Gly Arg Asp Val Asp Glu Cys Arg Met Leu Ala His Leu Cys | | 460 |
| 465 | 470 | 475 |
| Ala His Gly Glu Cys Ile Asn Ser Leu Gly Ser Phe Arg Cys His Cys | | 480 |
| | 485 | 490 |
| Gln Ala Gly Tyr Thr Pro Asp Ala Thr Ala Thr Thr Cys Leu Asp Met | | 495 |
| | 500 | 505 |
| Asp Glu Cys Ser Gln Val Pro Lys Pro Cys Thr Phe Leu Cys Lys Asn | | 510 |
| | 515 | 520 |
| Thr Lys Gly Ser Phe Leu Cys Ser Cys Pro Arg Gly Tyr Leu Leu Glu | | 525 |
| | 530 | 535 |
| Glu Asp Gly Arg Thr Cys Lys Asp Leu Asp Glu Cys Thr Ser Arg Gln | | 540 |
| 545 | 550 | 555 |
| His Asn Cys Gln Phe Leu Cys Val Asn Thr Val Gly Ala Phe Thr Cys | | 560 |
| | 565 | 570 |
| Arg Cys Pro Pro Gly Phe Thr Gln His His Gln Ala Cys Phe Asp Val | | 575 |
| | 580 | 585 |
| Asn Glu Cys Asp Gly Pro His Arg Cys Gln His Gly Cys Gln Asn Gln | | 590 |
| | 595 | 600 |
| | | 605 |

Leu Gly Gly Tyr Arg Cys Ser Cys Pro Gln Gly Phe Thr Gln His Ser
610 615 620
Gln Trp Ala Gln Cys Val Asp Glu Asn Glu Cys Ala Leu Ser Pro Pro
625 630 635 640
Thr Cys Gly Ser Ala Ser Cys Arg Asn Thr Leu Gly Gly Phe Arg Cys
645 650 655
Val Cys Pro Ser Gly Phe Asp Phe Asp Gln Ala Leu Gly Gly Cys Gln
660 665 670
Asp Val Asp Glu Cys Ala Gly Arg Arg Gly Pro Cys Ser Tyr Ser Cys
675 680 685
Ala Asn Thr Pro Gly Gly Phe Leu Cys Gly Cys Pro Gln Gly Tyr Phe
690 695 700
Arg Ala Gly Gln Gly His Cys Val Ser Gly Leu Gly Phe Ser Pro Gly
705 710 715 720
Pro Gln Asp Thr Pro Asp Lys Glu Glu Leu Leu Ser Ser Glu Ala Cys
725 730 735
Tyr Glu Cys Lys Ile Asn Gly Leu Ser Pro Arg Asp Arg Pro Arg Arg
740 745 750
Ser Ala His Arg Asp His Gln Val Asn Leu Ala Thr Leu Asp Ser Glu
755 760 765
Ala Leu Leu Thr Leu Gly Leu Asn Leu Ser His Leu Gly Arg Ala Glu
770 775 780
Arg Ile Leu Glu Leu Arg Pro Ala Leu Glu Gly Leu Glu Gly Arg Ile
785 790 795 800
Arg Tyr Val Ile Val Arg Gly Asn Glu Gln Gly Phe Phe Arg Met His
805 810 815
His Leu Arg Gly Val Ser Ser Leu Gln Leu Gly Arg Arg Arg Pro Gly
820 825 830
Pro Gly Thr Tyr Arg Leu Glu Val Val Ser His Met Ala Gly Pro Trp

835 840 845
 Gly Val Gln Pro Glu Gly Gln Pro Gly Pro Trp Gly Gln Ala Leu Arg
 850 855 860
 Leu Lys Val Gln Leu Gln Leu Leu
 865 870

<210> 415

<211> 1015

<212> PRT

<213> Homo sapiens

<400> 415

Met Asp Ile Met Ser Ala Gln Ala Ser Ser Gly Ser Thr Ser Val Leu
 1 5 10 15
 Arg Trp Val Leu Ser Cys Leu Ala Thr Leu Leu Arg Lys Gln Asp Leu
 20 25 30
 Glu Ala Trp Gly Tyr Pro Val Thr Leu Gln Val Tyr His Gly Leu Leu
 35 40 45
 Ser Phe Thr Val His Pro Lys Pro Lys Leu Val Thr Ala Cys Ala Met
 50 55 60
 Gln Ala Phe His Ser Leu Phe His Ala Arg Pro Gly Leu Ser Thr Leu
 65 70 75 80
 Ser Ala Glu Leu Asn Ala Gln Ile Ile Thr Ala Leu Tyr Asp Tyr Val
 85 90 95
 Pro Ser Glu Asp Asp Leu Gln Pro Leu Leu Ala Trp Leu Lys Val Met
 100 105 110
 Glu Lys Ala His Ile Asn Leu Val Arg Leu Gln Trp Asp Leu Gly Leu
 115 120 125

Gly His Leu Pro Arg Phe Phe Gly Thr Ala Val Thr Cys Leu Leu Ser
 130 135 140
 Pro His Ser Gln Val Leu Thr Ala Ala Thr Gln Ser Leu Lys Glu Ile
 145 150 155 160
 Leu Lys Glu Cys Val Ala Pro His Met Ala Asp Ile Gly Ser Val Thr
 165 170 175
 Ser Ser Ala Ser Gly Pro Ala Gln Ser Val Ala Lys Met Phe Arg Ala
 180 185 190
 Val Glu Glu Gly Leu Thr Tyr Lys Phe His Ala Ala Trp Ser Ser Val
 195 200 205
 Leu Gln Leu Leu Cys Val Phe Phe Glu Ala Cys Gly Arg Gln Ala His
 210 215 220
 Pro Val Met Arg Lys Cys Leu Gln Ser Leu Cys Asp Leu Arg Leu Ser
 225 230 235 240
 Pro His Phe Pro His Thr Ala Ala Leu Asp Gln Ala Val Gly Ala Ala
 245 250 255
 Val Thr Ser Met Gly Pro Glu Val Val Leu Gln Ala Val Pro Leu Glu
 260 265 270
 Ile Asp Gly Ser Glu Glu Thr Leu Asp Phe Pro Arg Ser Trp Leu Leu
 275 280 285
 Pro Val Ile Arg Asp His Val Gln Glu Thr Arg Leu Gly Phe Phe Thr
 290 295 300
 Thr Tyr Phe Leu Pro Leu Ala Asn Thr Leu Lys Ser Lys Ala Met Asp
 305 310 315 320
 Leu Ala Gln Ala Gly Ser Thr Val Glu Ser Lys Ile Tyr Asp Thr Leu
 325 330 335
 Gln Trp Gln Met Trp Thr Leu Leu Pro Gly Phe Cys Thr Arg Pro Thr
 340 345 350
 Asp Val Ala Ile Ser Phe Lys Gly Leu Ala Arg Thr Leu Gly Met Ala

355 360 365
Ile Ser Glu Arg Pro Asp Leu Arg Val Thr Val Cys Gln Val Leu Arg
370 375 380
Thr Leu Ile Thr Lys Gly Cys Gln Ala Glu Ala Asp Arg Ala Glu Val
385 390 395 400
Ser Arg Phe Ala Lys Asn Phe Leu Pro Ile Leu Phe Asn Leu Tyr Gly
405 410 415
Gln Pro Val Ala Ala Gly Asp Thr Pro Ala Pro Arg Arg Ala Val Leu
420 425 430
Glu Thr Ile Arg Thr Tyr Leu Thr Ile Thr Asp Thr Gln Leu Val Asn
435 440 445
Ser Leu Leu Glu Lys Ala Ser Glu Lys Val Leu Asp Pro Ala Ser Ser
450 455 460
Asp Phe Thr Arg Leu Ser Val Leu Asp Leu Val Val Ala Leu Ala Pro
465 470 475 480
Cys Ala Asp Glu Ala Ala Ile Ser Lys Leu Tyr Ser Thr Ile Arg Pro
485 490 495
Tyr Leu Glu Ser Lys Ala His Gly Val Gln Lys Lys Ala Tyr Arg Val
500 505 510
Leu Glu Glu Val Cys Ala Ser Pro Gln Gly Pro Gly Ala Leu Phe Val
515 520 525
Gln Ser His Leu Glu Asp Leu Lys Lys Thr Leu Leu Asp Ser Leu Arg
530 535 540
Ser Thr Ser Ser Pro Ala Lys Arg Pro Arg Leu Lys Cys Leu Leu His
545 550 555 560
Ile Val Arg Lys Leu Ser Ala Glu His Lys Glu Phe Ile Thr Ala Leu
565 570 575
Ile Pro Glu Val Ile Leu Cys Thr Lys Glu Val Ser Val Gly Ala Arg
580 585 590

Lys Asn Ala Phe Ala Leu Leu Val Glu Met Gly His Ala Phe Leu Arg
595 600 605
Phe Gly Ser Asn Gln Glu Glu Ala Leu Gln Cys Tyr Leu Val Leu Ile
610 615 620
Tyr Pro Gly Leu Val Gly Ala Val Thr Met Val Ser Cys Ser Ile Leu
625 630 635 640
Ala Leu Thr His Leu Leu Phe Glu Phe Lys Gly Leu Met Gly Thr Ser
645 650 655
Thr Val Glu Gln Leu Leu Glu Asn Val Cys Leu Leu Leu Ala Ser Arg
660 665 670
Thr Arg Asp Val Val Lys Ser Ala Leu Gly Phe Ile Lys Val Ala Val
675 680 685
Thr Val Met Asp Val Ala His Leu Ala Lys His Val Gln Leu Val Met
690 695 700
Glu Ala Ile Gly Lys Leu Ser Asp Asp Met Arg Arg His Phe Arg Met
705 710 715 720
Lys Leu Arg Asn Leu Phe Thr Lys Phe Ile Arg Lys Phe Gly Phe Glu
725 730 735
Leu Val Lys Arg Leu Leu Pro Glu Glu Tyr His Arg Val Leu Val Asn
740 745 750
Ile Arg Lys Ala Glu Ala Arg Ala Lys Arg His Arg Ala Leu Ser Gln
755 760 765
Ala Ala Val Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Pro Ala
770 775 780
Gln Gly Lys Gly Asp Ser Ile Glu Glu Ile Leu Ala Asp Ser Glu Asp
785 790 795 800
Glu Glu Asp Asn Glu Glu Glu Glu Arg Ser Arg Gly Lys Glu Gln Arg
805 810 815
Lys Leu Ala Arg Gln Arg Ser Arg Ala Trp Leu Lys Glu Gly Gly Gly

| | | | |
|---|------|------|-----|
| 820 | 825 | 830 | |
| Asp Glu Pro Leu Asn Phe Leu Asp Pro Lys Val Ala Gln Arg Val Leu | | | |
| 835 | 840 | 845 | |
| Ala Thr Gln Pro Gly Pro Gly Arg Gly Arg Lys Lys Asp His Gly Phe | | | |
| 850 | 855 | 860 | |
| Lys Val Ser Ala Asp Gly Arg Leu Ile Ile Arg Glu Glu Ala Asp Gly | | | |
| 865 | 870 | 875 | 880 |
| Asn Lys Met Glu Glu Glu Glu Gly Ala Lys Gly Glu Asp Glu Glu Met | | | |
| 885 | 890 | 895 | |
| Ala Asp Pro Met Glu Asp Val Ile Ile Arg Asn Lys Lys His Gln Lys | | | |
| 900 | 905 | 910 | |
| Leu Lys His Gln Lys Glu Ala Glu Glu Glu Glu Leu Glu Ile Pro Pro | | | |
| 915 | 920 | 925 | |
| Gln Tyr Gln Ala Gly Gly Ser Gly Ile His Arg Pro Val Ala Lys Lys | | | |
| 930 | 935 | 940 | |
| Ala Met Pro Gly Ala Glu Tyr Lys Ala Lys Lys Ala Lys Gly Asp Val | | | |
| 945 | 950 | 955 | 960 |
| Lys Lys Lys Gly Arg Pro Asp Pro Tyr Ala Tyr Ile Pro Leu Asn Arg | | | |
| 965 | 970 | 975 | |
| Ser Lys Leu Asn Arg Arg Lys Lys Met Lys Leu Gln Gly Gln Phe Lys | | | |
| 980 | 985 | 990 | |
| Gly Leu Val Lys Ala Ala Gln Arg Gly Ser Gln Val Gly His Lys Asn | | | |
| 995 | 1000 | 1005 | |
| Arg Arg Lys Asp Arg Arg Pro | | | |
| 1010 | 1015 | | |

<210> 416

<211> 445

<212> PRT

<213> Homo sapiens

<400> 416

```

Met Lys Asn Pro Glu Ala Gln Gln Asp Val Ser Val Ser Gln Gly Phe
  1             5             10             15
Arg Met Leu Phe Tyr Thr Met Lys Pro Ser Glu Thr Ser Phe Gln Thr
      20             25             30
Leu Glu Glu Val Pro Asp Tyr Val Lys Lys Ala Thr Pro Phe Phe Ile
      35             40             45
Ser Leu Met Leu Leu Glu Leu Val Val Ser Trp Ile Leu Lys Gly Lys
      50             55             60
Pro Pro Gly Arg Leu Asp Asp Ala Leu Thr Ser Ile Ser Ala Gly Val
      65             70             75             80
Leu Ser Arg Leu Pro Ser Leu Phe Phe Arg Ser Ile Glu Leu Thr Ser
      85             90             95
Tyr Ile Tyr Ile Trp Glu Asn Tyr Arg Leu Phe Asn Leu Pro Trp Asp
      100            105            110
Ser Pro Trp Thr Trp Tyr Ser Ala Phe Leu Gly Val Asp Phe Gly Tyr
      115            120            125
Tyr Trp Phe His Arg Met Ala His Glu Val Asn Ile Met Trp Ala Gly
      130            135            140
His Gln Thr His His Ser Ser Glu Asp Tyr Asn Leu Ser Thr Ala Leu
      145            150            155            160
Arg Gln Ser Val Leu Gln Ile Tyr Thr Ser Trp Ile Phe Tyr Ser Pro
      165            170            175
Leu Ala Leu Phe Ile Pro Pro Ser Val Tyr Ala Val His Leu Gln Phe
      180            185            190
Asn Leu Leu Tyr Gln Phe Trp Ile His Thr Glu Val Ile Asn Asn Leu

```

195 200 205
Gly Pro Leu Glu Leu Ile Leu Asn Thr Pro Ser His His Arg Val His
210 215 220
His Gly Arg Asn Arg Tyr Cys Ile Asp Lys Asn Tyr Ala Gly Val Leu
225 230 235 240
Ile Ile Trp Asp Lys Ile Phe Gly Thr Phe Glu Ala Glu Asn Glu Lys
245 250 255
Val Val Tyr Gly Leu Thr His Pro Ile Asn Thr Phe Glu Pro Ile Lys
260 265 270
Val Gln Phe His His Leu Phe Ser Ile Trp Thr Thr Phe Trp Ala Thr
275 280 285
Pro Gly Phe Phe Asn Lys Phe Ser Val Ile Phe Lys Gly Pro Gly Trp
290 295 300
Gly Pro Gly Lys Pro Arg Leu Gly Leu Ser Glu Glu Ile Pro Glu Val
305 310 315 320
Thr Gly Lys Glu Val Pro Phe Ser Ser Ser Ser Ser Gln Leu Leu Lys
325 330 335
Ile Tyr Thr Val Val Gln Phe Ala Leu Met Leu Ala Phe Tyr Glu Glu
340 345 350
Thr Phe Ala Asp Thr Ala Ala Leu Ser Gln Val Thr Leu Leu Leu Arg
355 360 365
Val Cys Phe Ile Ile Leu Thr Leu Thr Ser Ile Gly Phe Leu Leu Asp
370 375 380
Gln Arg Pro Lys Ala Ala Ile Met Glu Thr Leu Arg Cys Leu Met Phe
385 390 395 400
Leu Met Leu Tyr Arg Phe Gly His Leu Lys Pro Leu Val Pro Ser Leu
405 410 415
Ser Ser Ala Phe Glu Ile Val Phe Ser Ile Cys Ile Ala Phe Trp Gly
420 425 430

Val Arg Ser Met Lys Gln Leu Thr Ser His Pro Trp Lys

435

440

445

<210> 417

<211> 735

<212> PRT

<213> Homo sapiens

<400> 417

Met Thr Cys Leu Ile Cys Ile Ala Ser Val Lys Arg Asn Gln Ala Val

1

5

10

15

Trp Ser Cys Ser Gly Cys Phe Cys Ile Phe His Met Pro Cys Ile Gln

20

25

30

Lys Trp Ala Lys Asp Ser Gln Phe Leu Val Ser Ser Val Thr Asp Asp

35

40

45

Asp Phe Gly Lys Lys Asp Cys Pro Trp Pro Cys Pro Lys Cys Arg Phe

50

55

60

Glu Tyr Lys Arg Ser Glu Thr Pro Ser Arg Tyr Tyr Cys Tyr Cys Gly

65

70

75

80

Lys Val Glu Asp Pro Pro Leu Asp Pro Trp Leu Val Pro His Ser Cys

85

90

95

Gly Gln Val Cys Glu Arg Glu Phe Lys Pro Pro Cys Gly His Lys Cys

100

105

110

Leu Leu Leu Cys His Pro Gly Pro Cys Pro Pro Cys Pro Lys Met Val

115

120

125

Thr Thr Thr Cys Tyr Cys Lys Lys Ala Lys Pro Ile Pro Arg Arg Cys

130

135

140

Ser Ala Lys Glu Trp Ser Cys Gln Leu Pro Cys Gly Gln Lys Leu Leu

145 150 155 160
Cys Gly Gln His Lys Cys Glu Asn Pro Cys His Ala Gly Ser Cys Gln
 165 170 175
Pro Cys Pro Arg Val Ser Arg Gln Lys Cys Val Cys Gly Lys Lys Val
 180 185 190
Ala Glu Arg Ser Cys Ala Ser Pro Leu Trp His Cys Asp Gln Val Cys
 195 200 205
Gly Lys Thr Leu Pro Cys Gly Asn His Thr Cys Glu Gln Val Cys His
 210 215 220
Val Gly Ala Cys Gly Glu Cys Pro Arg Ser Gly Lys Arg Phe Cys Pro
225 230 235 240
Cys Gln Lys Ser Lys Phe Ser Leu Pro Cys Thr Glu Asp Val Pro Thr
 245 250 255
Cys Gly Asp Ser Cys Asp Lys Val Leu Glu Cys Gly Ile His Arg Cys
 260 265 270
Ser Gln Arg Cys His Arg Gly Pro Cys Glu Thr Cys Arg Gln Glu Val
 275 280 285
Glu Lys His Cys Arg Cys Gly Lys His Thr Lys Arg Met Pro Cys His
 290 295 300
Lys Pro Tyr Leu Cys Glu Thr Lys Cys Val Lys Met Arg Asp Cys Gln
305 310 315 320
Lys His Gln Cys Arg Arg Lys Cys Cys Pro Gly Asn Cys Pro Pro Cys
 325 330 335
Asp Gln Asn Cys Gly Arg Thr Leu Gly Cys Arg Asn His Lys Cys Pro
 340 345 350
Ser Val Cys His Arg Gly Ser Cys Tyr Pro Cys Pro Glu Thr Val Asp
 355 360 365
Val Lys Cys Asn Cys Gly Asn Thr Lys Val Thr Val Pro Cys Gly Arg
 370 375 380

Glu Arg Thr Thr Arg Pro Pro Lys Cys Lys Glu Gln Cys Ser Arg Pro
 385 390 395 400
 Pro Thr Cys His His Thr Ser Gln Glu Lys His Arg Cys His Phe Gly
 405 410 415
 Ser Cys Pro Pro Cys His Gln Pro Cys Gln Lys Val Leu Glu Lys Cys
 420 425 430
 Gly His Leu Cys Pro Ala Pro Cys His Asp Gln Ala Leu Ile Lys Gln
 435 440 445
 Thr Gly Arg His Gln Pro Thr Gly Pro Trp Glu Gln Pro Ser Glu Pro
 450 455 460
 Ala Phe Ile Gln Thr Ala Leu Pro Cys Pro Pro Cys Gln Val Pro Ile
 465 470 475 480
 Pro Met Glu Cys Leu Gly Lys His Glu Val Ser Pro Leu Pro Cys His
 485 490 495
 Ala Val Gly Pro Tyr Ser Cys Lys Arg Val Cys Gly Arg Ile Leu Asp
 500 505 510
 Cys Gln Asn His Thr Cys Met Lys Glu Cys His Lys Val Thr Lys Thr
 515 520 525
 Asp Gly Cys Thr Gly Lys Asn Lys Ala Gly Pro Glu Cys Leu His Cys
 530 535 540
 Glu Glu Gly Cys Ser Lys Ser Arg Pro Leu Gly Cys Leu His Pro Cys
 545 550 555 560
 Ile Leu Arg Cys His Pro Gly Glu Cys Pro Pro Cys Val Gln Met Leu
 565 570 575
 Arg Ile Lys Cys His Cys Lys Ile Thr Ser Leu Tyr Val Glu Cys Arg
 580 585 590
 Lys Ile Thr Thr Ala Asp Val Asn Glu Lys Asn Leu Leu Ser Cys Cys
 595 600 605
 Lys Asn Gln Cys Pro Lys Glu Leu Pro Cys Gly His Arg Cys Lys Glu

| | | |
|---|-----|-----|
| 610 | 615 | 620 |
| Met Cys His Pro Gly Glu Cys Pro Phe Asn Cys Asn Gln Lys Val Lys | | |
| 625 | 630 | 635 |
| Leu Arg Cys Pro Cys Lys Arg Ile Lys Lys Glu Leu Gln Cys Asn Lys | | |
| 645 | 650 | 655 |
| Val Arg Glu Asn Gln Val Ser Ile Glu Cys Asp Thr Thr Cys Lys Glu | | |
| 660 | 665 | 670 |
| Met Lys Arg Lys Ala Ser Glu Ile Lys Glu Ala Glu Ala Lys Ala Ala | | |
| 675 | 680 | 685 |
| Leu Glu Glu Glu Lys Arg Arg Gln Gln Ala Glu Leu Glu Ala Phe Glu | | |
| 690 | 695 | 700 |
| Asn Arg Leu Lys Gly Arg Arg Lys Lys Asn Arg Lys Arg Asp Glu Val | | |
| 705 | 710 | 715 |
| Ala Val Glu Leu Ser Leu Trp Gln Lys His Lys Tyr Tyr Leu Ile | | |
| 725 | 730 | 735 |

<210> 418

<211> 578

<212> PRT

<213> Homo sapiens

<400> 418

| |
|---|
| Met Pro Gly Pro His Leu Ser Leu Ser Ala Ile Ser Met Ser Leu Ser |
| 1 5 10 15 |
| Leu His Leu Phe Leu Leu Pro Leu Ser Leu Tyr Phe Phe Ser Ser Leu |
| 20 25 30 |
| Leu His Phe Gln Ser Leu Leu Leu Cys Leu Leu Val Ser Arg Phe Cys |
| 35 40 45 |

Val Ser Ile Ser Leu Thr Cys Ile Ser Met Ser Ser Phe Val Leu Phe
 50 55 60
 Ser Met Ser Leu Gly Arg His His Leu Leu Pro Thr Lys Ser Pro Tyr
 65 70 75 80
 Pro His Ala Tyr Thr Ser Leu Leu Ser Leu Pro Gln Phe Asn Pro Glu
 85 90 95
 Leu Val Leu Val Ser Ala Gly Phe Asp Ala Ala Arg Gly Asp Pro Leu
 100 105 110
 Gly Gly Cys Gln Val Ser Pro Glu Gly Tyr Ala His Leu Thr His Leu
 115 120 125
 Leu Met Gly Leu Ala Ser Gly Arg Ile Ile Leu Ile Leu Glu Gly Gly
 130 135 140
 Tyr Asn Leu Thr Ser Ile Ser Glu Ser Met Ala Ala Cys Thr Arg Ser
 145 150 155 160
 Leu Leu Gly Asp Pro Pro Pro Leu Leu Thr Leu Pro Arg Pro Pro Leu
 165 170 175
 Ser Gly Ala Leu Ala Ser Ile Thr Glu Thr Ile Gln Val His Arg Arg
 180 185 190
 Tyr Trp Arg Ser Leu Arg Val Met Lys Val Glu Asp Arg Glu Gly Pro
 195 200 205
 Ser Ser Ser Lys Leu Val Thr Lys Lys Ala Pro Gln Pro Ala Lys Pro
 210 215 220
 Arg Leu Ala Glu Arg Met Thr Thr Arg Glu Lys Lys Val Leu Glu Ala
 225 230 235 240
 Gly Met Gly Lys Val Thr Ser Ala Ser Phe Gly Glu Glu Ser Thr Pro
 245 250 255
 Gly Gln Thr Asn Ser Glu Thr Ala Val Val Ala Leu Thr Gln Asp Gln
 260 265 270
 Pro Ser Glu Ala Ala Thr Gly Gly Ala Thr Leu Ala Gln Thr Ile Ser

| | | |
|---|-----|-----|
| 275 | 280 | 285 |
| Glu Ala Ala Ile Gly Gly Ala Met Leu Gly Gln Thr Thr Ser Glu Glu | | |
| 290 | 295 | 300 |
| Ala Val Gly Gly Ala Thr Pro Asp Gln Thr Thr Ser Glu Glu Thr Val | | |
| 305 | 310 | 315 |
| Gly Gly Ala Ile Leu Asp Gln Thr Thr Ser Glu Asp Ala Val Gly Gly | | |
| 325 | 330 | 335 |
| Ala Thr Leu Gly Gln Thr Thr Ser Glu Glu Ala Val Gly Gly Ala Thr | | |
| 340 | 345 | 350 |
| Leu Ala Gln Thr Thr Ser Glu Ala Ala Met Glu Gly Ala Thr Leu Asp | | |
| 355 | 360 | 365 |
| Gln Thr Thr Ser Glu Glu Ala Pro Gly Gly Thr Glu Leu Ile Gln Thr | | |
| 370 | 375 | 380 |
| Pro Leu Ala Ser Ser Thr Asp His Gln Thr Pro Pro Thr Ser Pro Val | | |
| 385 | 390 | 395 |
| Gln Gly Thr Thr Pro Gln Ile Ser Pro Ser Thr Leu Ile Gly Ser Leu | | |
| 405 | 410 | 415 |
| Arg Thr Leu Glu Leu Gly Ser Glu Ser Gln Gly Ala Ser Glu Ser Gln | | |
| 420 | 425 | 430 |
| Ala Pro Gly Glu Glu Asn Leu Leu Gly Glu Ala Ala Gly Gly Gln Asp | | |
| 435 | 440 | 445 |
| Met Ala Asp Ser Met Leu Met Gln Gly Ser Arg Gly Leu Thr Asp Gln | | |
| 450 | 455 | 460 |
| Ala Ile Phe Tyr Ala Val Thr Pro Leu Pro Trp Cys Pro His Leu Val | | |
| 465 | 470 | 475 |
| Ala Val Cys Pro Ile Pro Ala Ala Gly Leu Asp Val Thr Gln Pro Cys | | |
| 485 | 490 | 495 |
| Gly Asp Cys Gly Thr Ile Gln Glu Asn Trp Val Cys Leu Ser Cys Tyr | | |
| 500 | 505 | 510 |

Gln Val Tyr Cys Gly Arg Tyr Ile Asn Gly His Met Leu Gln His His
 515 520 525
 Gly Asn Ser Gly His Pro Leu Val Leu Ser Tyr Ile Asp Leu Ser Ala
 530 535 540
 Trp Cys Tyr Tyr Cys Gln Ala Tyr Val His His Gln Ala Leu Leu Asp
 545 550 555 560
 Val Lys Asn Ile Ala His Gln Asn Lys Phe Gly Glu Asp Met Pro His
 565 570 575
 Pro His

<210> 419

<211> 108

<212> PRT

<213> Homo sapiens

<400> 419

Met Gly Thr Asp Glu Asp Cys Tyr Gln Glu Arg Gly Asp Trp Asp Gln
 1 5 10 15
 Glu Ser Gly Phe Gly Arg Glu Glu Pro Arg Leu Leu Phe Trp Met Cys
 20 25 30
 Gln Asp Arg Ser Ala Phe Glu Lys Ser Glu Leu Trp Tyr Gln Ile Ala
 35 40 45
 Ser Trp Ile Cys Glu Thr Gly Val Trp Gly Lys Glu Arg Pro Trp Leu
 50 55 60
 Lys Asn Val Ser Phe Gly Asn Val Asn Ile Lys Pro Gln Asp Trp Val
 65 70 75 80
 Thr Trp Pro Ser Arg Gly Val Gly Thr Glu Lys Arg Pro Trp Pro Glu

85 90 95
 Pro Trp Gly His Leu His Leu Gly Glu Lys Gly Met
 100 105

<210> 420

<211> 142

<212> PRT

<213> Homo sapiens

<400> 420

Met Ala Pro Val Lys Ile Ser His Val Val Ser Phe Ser Ser Gln Asp
 1 5 10 15
 Pro Lys Tyr Pro Val Glu Asn Leu Leu Asn Pro Asp Ser Pro Arg Arg
 20 25 30
 Pro Trp Leu Gly Cys Pro Gln Asp Lys Ser Gly Gln Leu Lys Val Glu
 35 40 45
 Leu Gln Leu Glu Arg Ala Val Pro Thr Gly Tyr Ile Asp Val Gly Asn
 50 55 60
 Cys Gly Cys Ala Phe Leu Gln Ile Asp Val Gly His Ser Ser Trp Pro
 65 70 75 80
 Leu Asp Arg Pro Phe Ile Thr Leu Leu Pro Ala Thr Thr Leu Met Ser
 85 90 95
 Leu Thr Asp Ser Lys Gln Gly Lys Asn Arg Ser Gly Val Arg Met Phe
 100 105 110
 Lys Asp Gly Lys Glu Gly Lys Ser Arg Lys Asp Gly Gly Gly Leu Tyr
 115 120 125
 Glu Lys Gln Arg Cys Ser Thr Lys Glu Asp Cys Glu Cys Tyr
 130 135 140

<210> 421

<211> 153

<212> PRT

<213> Homo sapiens

<400> 421

Met Tyr Glu Ile Tyr Val Glu Thr Cys Gly Gln Asn Thr Glu Asn Gln

1 5 10 15

Val Asn Pro Ala Thr Phe Gly Lys Leu Val Arg Leu Val Phe Pro Asp

20 25 30

Leu Gly Thr Arg Trp Leu Gly Thr Arg Gly Ser Ala Arg Tyr His Tyr

35 40 45

Asp Gly Ile Cys Ile Lys Lys Ser Ser Phe Phe Tyr Ala Gln Tyr Cys

50 55 60

Cys Leu Ile Gly Glu Lys Arg Tyr His Ser Gly Asp Ala Ile Ala Phe

65 70 75 80

Glu Lys Ser Thr Asn Tyr Asn Ser Ile Ile Gln Gln Glu Ala Thr Cys

85 90 95

Glu Asp His Ser Pro Met Lys Thr Asp Pro Val Gly Ser Pro Leu Ser

100 105 110

Glu Phe Arg Arg Cys Pro Phe Leu Glu Gln Glu Leu Ala Lys Lys Tyr

115 120 125

Ser Cys Asn Met Met Ala Phe Leu Ala Asp Glu Tyr Cys Asn Tyr Cys

130 135 140

Arg Asp Ile Leu Arg Asn Val Arg Asn

145 150

<210> 422

<211> 787

<212> PRT

<213> Homo sapiens

<400> 422

Met Glu Gly Ala Gly Glu Asn Ala Pro Glu Ser Ser Ser Ser Ala Pro

1 5 10 15

Gly Ser Glu Glu Ser Ala Arg Asp Pro Gln Val Pro Pro Pro Glu Glu

20 25 30

Glu Ser Gly Asp Cys Ala Arg Ser Leu Glu Ala Val Pro Lys Lys Leu

35 40 45

Cys Gly Tyr Leu Ser Lys Phe Gly Gly Lys Gly Pro Ile Arg Gly Trp

50 55 60

Lys Ser Arg Trp Phe Phe Tyr Asp Glu Arg Lys Cys Gln Leu Tyr Tyr

65 70 75 80

Ser Arg Thr Ala Gln Asp Ala Asn Pro Leu Asp Ser Val Asp Leu Ser

85 90 95

Ser Ala Val Phe Asp Cys Lys Ala Asp Ala Glu Glu Gly Ile Phe Glu

100 105 110

Ile Lys Thr Pro Ser Arg Val Ile Thr Leu Lys Ala Ala Thr Lys Gln

115 120 125

Ala Met Leu Tyr Trp Leu Gln Gln Leu Gln Met Lys Arg Trp Glu Phe

130 135 140

His Asn Ser Pro Pro Ala Pro Pro Ala Thr Pro Asp Ala Ala Leu Ala

145 150 155 160

Gly Asn Gly Pro Val Leu His Leu Glu Leu Gly Gln Glu Glu Ala Glu

165 170 175

Leu Glu Glu Phe Leu Cys Pro Val Lys Thr Pro Pro Gly Leu Val Gly
 180 185 190
 Val Ala Ala Ala Leu Gln Pro Phe Pro Ala Leu Gln Asn Ile Ser Leu
 195 200 205
 Lys His Leu Gly Thr Glu Ile Gln Asn Thr Met His Asn Ile Arg Gly
 210 215 220
 Asn Lys Gln Ala Gln Gly Thr Gly His Glu Pro Pro Gly Glu Asp Ser
 225 230 235 240
 Pro Gln Ser Gly Glu Pro Gln Arg Glu Glu Gln Pro Leu Ala Ser Asp
 245 250 255
 Ala Ser Thr Pro Gly Arg Glu Pro Glu Asp Ser Pro Lys Pro Ala Pro
 260 265 270
 Lys Pro Ser Leu Thr Ile Ser Phe Ala Gln Lys Ala Lys Arg Gln Asn
 275 280 285
 Asn Thr Phe Pro Phe Phe Ser Glu Gly Ile Thr Arg Asn Arg Thr Ala
 290 295 300
 Gln Glu Lys Val Ala Ala Leu Glu Gln Gln Val Leu Met Leu Thr Lys
 305 310 315 320
 Glu Leu Lys Ser Gln Lys Glu Leu Val Lys Ile Leu His Lys Ala Leu
 325 330 335
 Glu Ala Ala Gln Gln Glu Lys Arg Ala Ser Ser Ala Tyr Leu Ala Ala
 340 345 350
 Ala Glu Asp Lys Asp Arg Leu Glu Leu Val Arg His Lys Val Arg Gln
 355 360 365
 Ile Ala Glu Leu Gly Arg Arg Val Glu Ala Leu Glu Gln Glu Arg Glu
 370 375 380
 Ser Leu Ala His Thr Ala Ser Leu Arg Glu Gln Gln Val Gln Glu Leu
 385 390 395 400
 Gln Gln His Val Gln Leu Leu Met Asp Lys Asn His Ala Lys Gln Gln

| | | |
|---|---------------------------------|-----|
| 405 | 410 | 415 |
| Val Ile Cys Lys Leu Ser Glu Lys | Val Thr Gln Asp Phe Thr His Pro | |
| 420 | 425 | 430 |
| Pro Asp Gln Ser Pro Leu Arg Pro Asp Ala Ala Asn Arg Asp Phe Leu | | |
| 435 | 440 | 445 |
| Ser Gln Gln Gly Lys Ile Glu His Leu Lys Asp Asp Met Glu Ala Tyr | | |
| 450 | 455 | 460 |
| Arg Thr Gln Asn Cys Phe Leu Asn Ser Glu Ile His Gln Val Thr Lys | | |
| 465 | 470 | 475 |
| Ile Trp Arg Lys Val Ala Glu Lys Glu Lys Ala Leu Leu Thr Lys Cys | | |
| 485 | 490 | 495 |
| Ala Tyr Leu Gln Ala Arg Asn Cys Gln Val Glu Ser Lys Tyr Leu Ala | | |
| 500 | 505 | 510 |
| Gly Leu Arg Arg Leu Gln Glu Ala Leu Gly Asp Glu Ala Ser Glu Cys | | |
| 515 | 520 | 525 |
| Ser Glu Leu Leu Arg Gln Leu Val Gln Glu Ala Leu Gln Trp Glu Ala | | |
| 530 | 535 | 540 |
| Gly Glu Ala Ser Ser Asp Ser Ile Glu Leu Ser Pro Ile Ser Lys Tyr | | |
| 545 | 550 | 555 |
| Asp Glu Tyr Gly Phe Leu Thr Val Pro Asp Tyr Glu Val Glu Asp Leu | | |
| 565 | 570 | 575 |
| Lys Leu Leu Ala Lys Ile Gln Ala Leu Glu Ser Arg Ser His His Leu | | |
| 580 | 585 | 590 |
| Leu Gly Leu Glu Ala Val Asp Arg Pro Leu Arg Glu Arg Trp Val Ala | | |
| 595 | 600 | 605 |
| Leu Gly Asp Leu Val Pro Ser Ala Glu Leu Lys Gln Leu Leu Arg Ala | | |
| 610 | 615 | 620 |
| Gly Val Pro Arg Glu His Arg Pro Arg Val Trp Arg Trp Leu Val His | | |
| 625 | 630 | 635 |
| | | 640 |

Leu Arg Val Gln His Leu His Thr Pro Gly Cys Tyr Gln Glu Leu Leu
 645 650 655
 Ser Arg Gly Gln Ala Arg Glu His Pro Ala Ala Arg Gln Ile Glu Leu
 660 665 670
 Asp Leu Asn Arg Thr Phe Pro Asn Asn Lys His Phe Thr Cys Gly Ser
 675 680 685
 Trp Ser Ser Leu Arg Gln Ser Thr Trp Gly Gly Gly His Pro Gly Ala
 690 695 700
 Glu Leu Cys Pro Arg Ala Val Pro Ala Arg Thr Arg Trp Arg Gly Lys
 705 710 715 720
 Pro Asp Leu Ala Thr Ser Pro Pro His Ser Leu Pro His Pro Trp Leu
 725 730 735
 Ala Asp Pro Leu Glu Val Arg His Gly Pro Val Ala Gln Pro Trp Val
 740 745 750
 Ser His His His Val Thr Leu Asp Met Ser Leu Pro Leu Ser Gly Pro
 755 760 765
 Gln Phe Pro His Trp Asp Ile Val Cys Cys Lys Ala Ile Gly Trp Ala
 770 775 780
 Thr Ser Ser
 785

<210> 423

<211> 221

<212> PRT

<213> Homo sapiens

<400> 423

Met Ser Gly Glu Ala Thr Val Leu Ala Tyr His Ala Pro Glu Glu Gln

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| Glu Gly Leu Leu Val Val Lys Val Glu Glu Glu Asn Tyr Val Leu Asp | | | |
| 20 | 25 | 30 | |
| Gln Asp Phe Gly Leu Gln Glu Asn Pro Trp Ser Gln Glu Val Phe Arg | | | |
| 35 | 40 | 45 | |
| Gln Lys Phe Arg Gln Phe Ser Tyr Ser Asp Ser Thr Gly Pro Arg Glu | | | |
| 50 | 55 | 60 | |
| Ala Leu Ser Arg Leu Arg Glu Leu Cys Cys Gln Trp Leu Arg Pro Glu | | | |
| 65 | 70 | 75 | 80 |
| Val His Ser Lys Glu Gln Ile Leu Glu Leu Leu Met Leu Glu Gln Phe | | | |
| 85 | 90 | 95 | |
| Leu Ala Ile Leu Pro Glu Glu Leu Gln Ala Trp Leu Arg Glu His Arg | | | |
| 100 | 105 | 110 | |
| Pro Glu Asn Gly Glu Glu Ala Val Thr Met Leu Glu Glu Leu Glu Lys | | | |
| 115 | 120 | 125 | |
| Glu Leu Glu Glu Pro Arg Gln Gln Asp Thr Thr His Gly Gln Glu Met | | | |
| 130 | 135 | 140 | |
| Phe Trp Gln Glu Met Thr Ser Thr Gly Ala Leu Lys Ser Leu Ser Leu | | | |
| 145 | 150 | 155 | 160 |
| Asn Ser Pro Val Gln Pro Leu Glu Asn Gln Cys Lys Thr Glu Thr Gln | | | |
| 165 | 170 | 175 | |
| Glu Ser Gln Ala Phe Gln Glu Arg Asp Gly Val Ser Leu Cys His Pro | | | |
| 180 | 185 | 190 | |
| Gly Trp Ser Ala Val Val Gln Pro Gln Leu Thr Ala Val Ala Leu Asn | | | |
| 195 | 200 | 205 | |
| Pro Trp Val Lys Val Ile Leu Leu Pro Gln Pro Pro Glu | | | |
| 210 | 215 | 220 | |

<210> 424

<211> 1043

<212> PRT

<213> Homo sapiens

<400> 424

Met Ala Met Ala Leu Glu Leu Gln Ala Gln Ala Ser Pro Gln Pro Glu

1 5 10 15

Pro Glu Glu Leu Leu Ile Val Lys Leu Glu Glu Asp Ser Trp Gly Ser

20 25 30

Glu Ser Lys Leu Trp Glu Lys Asp Arg Gly Ser Val Ser Gly Pro Glu

35 40 45

Ala Ser Arg Gln Arg Phe Arg Gln Phe Gln Tyr Arg Asp Ala Ala Gly

50 55 60

Pro His Glu Ala Phe Ser Gln Leu Trp Ala Leu Cys Cys Arg Trp Leu

65 70 75 80

Arg Pro Glu Ile Arg Leu Lys Glu Gln Ile Leu Glu Leu Leu Val Leu

85 90 95

Glu Gln Phe Leu Thr Ile Leu Pro Arg Glu Val Gln Thr Trp Val Gln

100 105 110

Ala Arg His Pro Glu Ser Gly Glu Glu Ala Val Ala Leu Val Glu Asp

115 120 125

Trp His Arg Glu Thr Arg Thr Ala Gly Gln Ser Gly Leu Glu Leu His

130 135 140

Thr Glu Glu Thr Arg Pro Leu Lys Thr Gly Glu Glu Ala Gln Ser Phe

145 150 155 160

Gln Leu Gln Pro Val Asp Pro Trp Pro Glu Gly Gln Ser Gln Lys Lys

165 170 175

Gly Val Lys Asn Thr Cys Pro Asp Leu Pro Asn His Leu Asn Ala Glu

| | | |
|---|-----|-----|
| 180 | 185 | 190 |
| Val Ala Pro Gln Pro Leu Lys Glu Ser Ala Val Leu Thr Pro Arg Val | | |
| 195 | 200 | 205 |
| Pro Thr Leu Pro Lys Met Gly Ser Val Gly Asp Trp Glu Val Thr Ala | | |
| 210 | 215 | 220 |
| Glu Ser Gln Glu Ala Leu Gly Pro Gly Lys His Ala Glu Lys Glu Leu | | |
| 225 | 230 | 235 |
| Cys Lys Asp Pro Pro Gly Asp Asp Cys Gly Asn Ser Val Cys Leu Gly | | |
| 245 | 250 | 255 |
| Val Pro Val Ser Lys Pro Ser Asn Thr Ser Glu Lys Glu Gln Gly Pro | | |
| 260 | 265 | 270 |
| Glu Phe Trp Gly Leu Ser Leu Ile Asn Ser Gly Lys Arg Ser Thr Ala | | |
| 275 | 280 | 285 |
| Asp Tyr Ser Leu Asp Asn Glu Pro Ala Gln Ala Leu Thr Trp Arg Asp | | |
| 290 | 295 | 300 |
| Ser Arg Ala Trp Glu Glu Gln Tyr Gln Trp Asp Val Glu Asp Met Lys | | |
| 305 | 310 | 315 |
| Val Ser Gly Val His Trp Gly Tyr Glu Glu Thr Lys Thr Phe Leu Ala | | |
| 325 | 330 | 335 |
| Ile Leu Ser Glu Ser Pro Phe Ser Glu Lys Leu Arg Thr Cys His Gln | | |
| 340 | 345 | 350 |
| Asn Arg Gln Val Tyr Arg Ala Ile Ala Glu Gln Leu Arg Ala Arg Gly | | |
| 355 | 360 | 365 |
| Phe Leu Arg Thr Leu Glu Gln Cys Arg Tyr Arg Val Lys Asn Leu Leu | | |
| 370 | 375 | 380 |
| Arg Asn Tyr Arg Lys Ala Lys Ser Ser His Pro Pro Gly Thr Cys Pro | | |
| 385 | 390 | 395 |
| Phe Tyr Glu Glu Leu Glu Ala Leu Val Arg Ala Arg Thr Ala Ile Arg | | |
| 405 | 410 | 415 |

Ala Thr Asp Gly Pro Gly Glu Ala Val Ala Leu Pro Arg Leu Gly Asp
420 425 430

Ser Asp Ala Glu Met Asp Glu Gln Glu Glu Gly Gly Trp Asp Pro Glu
435 440 445

Glu Met Ala Glu Asp Cys Asn Gly Ala Gly Leu Val Asn Val Glu Ser
450 455 460

Thr Gln Gly Pro Arg Ile Ala Gly Ala Pro Ala Leu Phe Gln Ser Arg
465 470 475 480

Ile Ala Gly Val His Trp Gly Tyr Glu Glu Thr Lys Ala Phe Leu Ala
485 490 495

Ile Leu Ser Glu Ser Pro Phe Ser Glu Lys Leu Arg Thr Cys His Gln
500 505 510

Asn Ser Gln Val Tyr Arg Ala Ile Ala Glu Arg Leu Cys Ala Leu Gly
515 520 525

Phe Leu Arg Thr Leu Glu Gln Cys Arg Tyr Arg Phe Lys Asn Leu Leu
530 535 540

Arg Ser Tyr Arg Lys Ala Lys Ser Ser His Pro Pro Gly Thr Cys Pro
545 550 555 560

Phe Tyr Glu Glu Leu Asp Ser Leu Met Arg Ala Arg Ala Ala Val Arg
565 570 575

Ala Met Gly Thr Val Arg Glu Ala Ala Gly Leu Pro Arg Cys Gly Gln
580 585 590

Ser Ser Ala Glu Thr Asp Ala Gln Glu Ala Trp Gly Glu Val Ala Asn
595 600 605

Glu Asp Ala Val Lys Pro Ser Thr Leu Cys Pro Lys Ala Pro Asp Met
610 615 620

Gly Phe Glu Met Arg His Glu Asp Glu Asp Gln Ile Ser Glu Gln Asp
625 630 635 640

Ile Phe Glu Gly Leu Pro Gly Ala Leu Ser Lys Cys Pro Thr Glu Ala

| | | |
|---|-----|-----|
| 645 | 650 | 655 |
| Val Cys Gln Pro Leu Asp Trp Gly Glu Asp Ser Glu Asn Glu Asn Glu | | |
| 660 | 665 | 670 |
| Asp Glu Gly Gln Trp Gly Asn Pro Ser Gln Glu Gln Trp Gln Glu Ser | | |
| 675 | 680 | 685 |
| Ser Ser Glu Glu Asp Leu Glu Lys Leu Ile Asp His Gln Gly Leu Tyr | | |
| 690 | 695 | 700 |
| Leu Ala Glu Lys Pro Tyr Lys Cys Asp Thr Cys Met Lys Ser Phe Ser | | |
| 705 | 710 | 715 |
| 720 | | |
| Arg Ser Ser His Phe Ile Ala His Gln Arg Ile His Thr Gly Glu Lys | | |
| 725 | 730 | 735 |
| Pro Tyr Lys Arg Leu Glu Cys Gly Lys Asn Phe Ser Asp Arg Ser Asn | | |
| 740 | 745 | 750 |
| Leu Asn Thr His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys | | |
| 755 | 760 | 765 |
| Leu Glu Cys Gly Lys Ser Phe Ser Asp His Ser Asn Leu Ile Thr His | | |
| 770 | 775 | 780 |
| Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Gly Glu Cys Trp | | |
| 785 | 790 | 795 |
| 800 | | |
| Lys Ser Phe Asn Gln Ser Ser Asn Leu Leu Lys His Gln Arg Ile His | | |
| 805 | 810 | 815 |
| Leu Gly Gly Asn Pro Asp Gln Cys Ser Glu Pro Gly Gly Asn Phe Ala | | |
| 820 | 825 | 830 |
| Gln Ser Pro Ser Phe Ser Ala His Trp Arg Asn Ser Thr Glu Glu Thr | | |
| 835 | 840 | 845 |
| Ala Pro Glu Gln Pro Gln Ser Ile Ser Lys Asp Leu Asn Ser Pro Gly | | |
| 850 | 855 | 860 |
| Pro His Ser Thr Asn Ser Gly Glu Lys Leu Tyr Glu Cys Ser Glu Cys | | |
| 865 | 870 | 875 |
| 880 | | |

Gly Arg Ser Phe Ser Lys Ser Ser Ala Leu Ile Ser His Gln Arg Ile
885 890 895
His Thr Gly Glu Lys Pro Tyr Glu Cys Ala Glu Cys Gly Lys Ser Phe
900 905 910
Ser Lys Ser Ser Thr Leu Ala Asn His Gln Arg Thr His Thr Gly Glu
915 920 925
Lys Pro Tyr Lys Cys Val Asp Cys Gly Lys Cys Phe Ser Glu Arg Ser
930 935 940
Lys Leu Ile Thr His Gln Arg Val His Thr Gly Glu Lys Pro Tyr Lys
945 950 955 960
Cys Leu Glu Cys Gly Lys Phe Phe Arg Asp Arg Ser Asn Leu Ile Thr
965 970 975
His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Arg Glu Cys
980 985 990
Gly Lys Cys Phe Asn Gln Ser Ser Ser Leu Ile Ile His Gln Arg Ile
995 1000 1005
His Thr Gly Glu Lys Pro Tyr Lys Cys Thr Glu Cys Gly Lys Asp Phe
1010 1015 1020
Asn Asn Ser Ser His Phe Ser Ala His Arg Arg Thr His Ala Gly Gly
1025 1030 1035 1040
Lys Ala Ser

<210> 425

<211> 422

<212> PRT

<213> Homo sapiens

<400> 425

Met Pro Leu Trp Glu Ala Pro Ser Asp His Pro Ala Asn Pro Pro Ala

1 5 10 15

Thr Leu Gln Gly His Thr Ser Leu Pro Gly Cys Gln Glu Glu Pro Ala

20 25 30

Arg Asp Pro Gln Ser Gly Leu Pro Gln Ile Thr Ser Glu Ser Ser Ser

35 40 45

Phe Ser Glu Gly Ser Leu Pro Ser Trp Ser Ser Gly Pro Ala Gly Ala

50 55 60

Lys Leu Asn Ala Ser His Glu Gly Ile Gly Ser Ser Ser Asp Gly Asn

65 70 75 80

Gly Asp Ser Lys Ala Ala Thr Glu Arg Val Val Ser Ala Met Asp Thr

85 90 95

Val Arg Arg Lys His Pro Glu Ile Thr Phe Tyr Ile Leu Val Lys Ala

100 105 110

Ile Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Ala Thr Gly

115 120 125

Ser Ile Ile Leu Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr

130 135 140

Ile His Leu Asn Leu Phe Leu Ser Phe Ile Leu Arg Ala Ile Ser Val

145 150 155 160

Leu Val Lys Asp Asp Val Leu Tyr Ser Ser Ser Gly Thr Leu His Cys

165 170 175

Pro Asp Gln Pro Ser Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe

180 185 190

Leu Gln Tyr Cys Ile Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly

195 200 205

Leu Tyr Leu His Thr Leu Leu Val Ala Met Leu Pro Pro Arg Arg Cys

210 215 220

Phe Leu Ala Tyr Leu Leu Ile Gly Trp Gly Leu Pro Thr Val Cys Ile
 225 230 235 240

Gly Ala Trp Thr Ala Ala Arg Leu Tyr Leu Glu Asp Thr Gly Cys Trp
 245 250 255

Asp Thr Asn Asp His Ser Val Pro Trp Trp Val Ile Arg Ile Pro Ile
 260 265 270

Leu Ile Ser Ile Ile Val Asn Phe Val Leu Phe Ile Ser Ile Ile Arg
 275 280 285

Ile Leu Leu Gln Lys Leu Thr Ser Pro Asp Val Gly Gly Asn Asp Gln
 290 295 300

Ser Gln Tyr Lys Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu
 305 310 315 320

Phe Gly Val His Tyr Met Val Phe Ala Val Phe Pro Ile Ser Ile Ser
 325 330 335

Ser Lys Tyr Gln Ile Leu Phe Glu Leu Cys Leu Gly Ser Phe Gln Gly
 340 345 350

Leu Val Val Ala Val Leu Tyr Cys Phe Leu Asn Ser Glu Val Gln Cys
 355 360 365

Glu Leu Lys Arg Lys Trp Arg Ser Arg Cys Pro Thr Pro Ser Ala Ser
 370 375 380

Arg Asp Tyr Arg Val Cys Gly Ser Ser Phe Ser Arg Asn Gly Ser Glu
 385 390 395 400

Gly Ala Leu Gln Phe His Arg Gly Ser Arg Ala Gln Ser Phe Leu Gln
 405 410 415

Thr Glu Thr Ser Val Ile
 420

<210> 426

<211> 310

<212> PRT

<213> Homo sapiens

<400> 426

Met Pro Ser Ser Lys Pro Gly Ser Pro Ala Pro Gln Asp Pro Ser Pro

1 5 10 15

Ser Cys Arg Thr Cys Ser Asn Gln Val Gln Pro Gly His Leu Leu Leu

20 25 30

Pro Leu Thr Lys Ala Ser Leu Thr Gly Pro Ser Pro Pro Pro Ala Lys

35 40 45

Leu Gly Arg Ala Gln Gly Ala Pro Ser Pro Lys Gly Pro Leu Glu Ile

50 55 60

Gly Trp Ser Pro Asp Ala Gln Pro Leu Arg Leu Gly Glu Thr Phe Leu

65 70 75 80

Pro Lys Gly Val Ala Gln Leu Ser Arg Ala Ser Ser Ser Gly His Lys

85 90 95

Val Gly Phe Leu Gln Pro Trp Pro Pro His Pro Leu Leu Pro Gln Glu

100 105 110

Arg Val Pro Arg His Gln Arg Gln Cys Cys Pro Arg Ala Gly Pro Ala

115 120 125

Phe Gly Cys Leu Arg Gly Arg Pro Gly Gly Trp Pro Ala Thr Gly Ser

130 135 140

Gly Gly Arg Gln Gln Gly Arg Lys Met Gly His Pro Pro Val Ser Pro

145 150 155 160

Ser Ala Pro Ala Pro Ala Gly Thr Thr Ala Ile Pro Gly Leu Ile Pro

165 170 175

Asp Leu Val Ala Gly Thr Pro Trp Pro Arg Trp Ala Leu Ile Ala Gly

180 185 190

Ala Leu Ala Ala Gly Val Leu Leu Val Ser Cys Leu Leu Cys Ala Ala

195

200

205

Cys Cys Cys Cys Arg Arg His Arg Lys Lys Pro Arg Asp Lys Glu Ser

210

215

220

Val Gly Leu Gly Ser Ala Arg Gly Thr Thr Thr Thr His Leu Val Gln

225

230

235

240

Pro Asp Val Asp Gly Leu Glu Ser Ser Pro Gly Asp Ala Gln Gln Trp

245

250

255

Gly Arg Leu Gln Leu Ser Leu Glu Phe Asp Phe Gly Ser Gln Glu Val

260

265

270

Lys Gly Pro Ala Ala Gln Asp Gln Arg Phe Cys Glu Phe Pro Glu Arg

275

280

285

Val Thr Gly Glu Gly Gln Thr Pro Cys Pro Gly Trp Trp Gly Ala Asp

290

295

300

Arg Ala Gly Ala Leu Gly

305

310

<210> 427

<211> 872

<212> PRT

<213> Homo sapiens

<400> 427

Met Gln Glu Ala Ile Ile Leu Leu Ala Leu Leu Gly Ala Met Ser Gly

1

5

10

15

Asn Val Ala Glu Asn Ser Pro Pro Gly Thr Ser Val His Lys Phe Ser

20

25

30

Val Lys Leu Ser Ala Ser Leu Ser Pro Val Ile Pro Gly Phe Pro Gln

| | | |
|---|-----|-----|
| 35 | 40 | 45 |
| Ile Val Asn Ser Asn Pro Leu Thr Glu Ala Phe Arg Val Asn Trp Leu | | |
| 50 | 55 | 60 |
| Ser Gly Thr Tyr Phe Glu Val Val Thr Thr Gly Met Glu Gln Leu Asp | | |
| 65 | 70 | 75 |
| Phe Glu Thr Gly Pro Asn Ile Phe Asp Leu Gln Ile Tyr Val Lys Asp | | |
| 85 | 90 | 95 |
| Glu Val Gly Val Thr Asp Leu Gln Val Leu Thr Val Gln Val Thr Asp | | |
| 100 | 105 | 110 |
| Val Asn Glu Pro Pro Gln Phe Gln Gly Asn Leu Ala Glu Gly Leu His | | |
| 115 | 120 | 125 |
| Leu Tyr Ile Val Glu Arg Ala Asn Pro Gly Phe Ile Tyr Gln Val Glu | | |
| 130 | 135 | 140 |
| Ala Phe Asp Pro Glu Asp Thr Ser Arg Asn Ile Pro Leu Ser Tyr Phe | | |
| 145 | 150 | 155 |
| Leu Ile Ser Pro Pro Lys Ser Phe Arg Met Ser Ala Asn Gly Thr Leu | | |
| 165 | 170 | 175 |
| Phe Ser Thr Thr Glu Leu Asp Phe Glu Ala Arg His Arg Ser Phe His | | |
| 180 | 185 | 190 |
| Leu Ile Val Glu Val Arg Asp Ser Gly Gly Leu Lys Ala Ser Thr Glu | | |
| 195 | 200 | 205 |
| Leu Gln Val Asn Ile Val Asn Leu Asn Asp Glu Val Pro Arg Phe Thr | | |
| 210 | 215 | 220 |
| Ser Pro Thr Arg Val Tyr Thr Val Leu Glu Glu Leu Ser Pro Gly Thr | | |
| 225 | 230 | 235 |
| Ile Val Ala Asn Ile Thr Ala Glu Asp Pro Asp Asp Glu Gly Phe Pro | | |
| 245 | 250 | 255 |
| Ser His Leu Leu Tyr Ser Ile Thr Thr Val Ser Lys Tyr Phe Met Ile | | |
| 260 | 265 | 270 |

Asn Gln Leu Thr Gly Thr Ile Gln Val Ala Gln Arg Ile Asp Arg Asp
275 280 285

Ala Gly Glu Leu Arg Gln Asn Pro Thr Ile Ser Leu Glu Val Leu Val
290 295 300

Lys Asp Arg Pro Tyr Gly Gly Gln Glu Asn Arg Ile Gln Ile Thr Phe
305 310 315 320

Ile Val Glu Asp Val Asn Asp Asn Pro Ala Thr Cys Gln Lys Phe Thr
325 330 335

Phe Ser Ile Met Val Pro Glu Arg Thr Ala Lys Gly Thr Leu Leu Leu
340 345 350

Asp Leu Asn Lys Phe Cys Phe Asp Asp Asp Ser Glu Ala Pro Asn Asn
355 360 365

Arg Phe Asn Phe Thr Met Pro Ser Gly Val Gly Ser Gly Ser Arg Phe
370 375 380

Leu Gln Asp Pro Ala Gly Ser Gly Lys Ile Val Leu Ile Gly Asp Leu
385 390 395 400

Asp Tyr Glu Asn Pro Ser Asn Leu Ala Ala Gly Asn Lys Tyr Thr Val
405 410 415

Ile Ile Gln Val Gln Asp Val Ala Pro Pro Tyr Tyr Lys Asn Asn Val
420 425 430

Tyr Val Tyr Ile Leu Thr Ser Pro Glu Asn Glu Phe Pro Leu Ile Phe
435 440 445

Asp Arg Pro Ser Tyr Val Phe Asp Val Ser Glu Arg Arg Pro Ala Arg
450 455 460

Thr Arg Val Gly Gln Val Arg Ala Thr Asp Lys Asp Leu Pro Gln Ser
465 470 475 480

Ser Leu Leu Tyr Ser Ile Ser Thr Gly Gly Ala Ser Leu Gln Tyr Pro
485 490 495

Asn Val Phe Trp Ile Asn Pro Lys Thr Gly Glu Leu Gln Leu Val Thr

500 505 510
Lys Val Asp Cys Glu Thr Thr Pro Ile Tyr Ile Leu Arg Ile Gln Ala
515 520 525
Thr Asn Asn Glu Asp Thr Ser Ser Val Thr Val Thr Val Asn Ile Leu
530 535 540
Glu Glu Asn Asp Glu Lys Pro Ile Cys Thr Pro Asn Ser Tyr Phe Leu
545 550 555 560
Ala Leu Pro Val Asp Leu Lys Val Gly Thr Asn Ile Gln Asn Phe Lys
565 570 575
Leu Thr Cys Thr Asp Leu Asp Ser Ser Pro Arg Ser Phe Arg Tyr Ser
580 585 590
Ile Gly Pro Gly Asn Val Asn Asn His Phe Thr Phe Ser Pro Asn Ala
595 600 605
Gly Ser Asn Val Thr Arg Pro Leu Leu Thr Ser Arg Phe Asp Tyr Ala
610 615 620
Gly Gly Phe Asp Lys Ile Trp Asp Tyr Lys Leu Leu Val Tyr Val Thr
625 630 635 640
Asp Asp Asn Leu Met Ser Asp Lys Lys Lys Ala Glu Ala Leu Val Glu
645 650 655
Thr Gly Thr Val Thr Leu Ser Ile Lys Val Ile Pro His Pro Thr Thr
660 665 670
Ile Ile Thr Thr Thr Pro Arg Pro Arg Val Thr Tyr Gln Val Leu Arg
675 680 685
Lys Asn Val Tyr Ser Pro Ser Ala Trp Tyr Val Pro Phe Val Ile Thr
690 695 700
Leu Gly Ser Ile Leu Leu Leu Gly Leu Leu Val Tyr Leu Val Val Leu
705 710 715 720
Leu Ala Lys Ala Ile His Arg His Cys Pro Cys Lys Thr Gly Lys Asn
725 730 735

Lys Glu Pro Leu Thr Lys Lys Gly Glu Thr Lys Thr Ala Glu Arg Asp

740

745

750

Val Val Val Glu Thr Ile Gln Met Asn Thr Ile Phe Asp Gly Glu Ala

755

760

765

Ile Asp Pro Val Thr Gly Glu Thr Tyr Glu Leu Asn Ser Lys Thr Gly

770

775

780

Ala Arg Lys Trp Lys Asp Pro Leu Thr Gln Met Pro Lys Trp Lys Glu

785

790

795

800

Ser Ser His Gln Gly Ala Ala Pro Arg Arg Val Thr Ala Gly Glu Gly

805

810

815

Met Gly Ser Leu Arg Ser Ala Asn Trp Glu Glu Asp Glu Leu Ser Gly

820

825

830

Lys Ala Trp Ala Glu Asp Ala Asp Leu Gly Ser Arg Asn Glu Gly Gly

835

840

845

Lys Leu Gly Asn Pro Lys Asn Arg Asn Pro Ala Phe Met Asn Arg Ala

850

855

860

Tyr Pro Lys Pro His Pro Gly Lys

865

870

<210> 428

<211> 530

<212> PRT

<213> Homo sapiens

<400> 428

Met Glu Gly Pro Leu Thr Pro Pro Pro Leu Gln Gly Gly Gly Ala Ala

1

5

10

15

Ala Val Pro Glu Pro Gly Ala Arg Gln His Pro Gly His Glu Thr Ala

| | | |
|---|-----|-----|
| 20 | 25 | 30 |
| Ala Gln Arg Tyr Ser Ala Arg Leu Leu Gln Ala Gly Tyr Glu Pro Glu | | |
| 35 | 40 | 45 |
| Ser Asp Phe Leu Ile Leu Pro Gly Phe Ile Asp Phe Ile Ala Asp Glu | | |
| 50 | 55 | 60 |
| Val Asp Leu Thr Ser Ala Leu Thr Arg Lys Ile Thr Leu Lys Thr Pro | | |
| 65 | 70 | 75 |
| Leu Ile Ser Ser Pro Met Asp Thr Val Thr Glu Ala Asp Met Ala Phe | | |
| 85 | 90 | 95 |
| Ala Met Ala Leu Met Gly Gly Ile Gly Phe Ile His His Asn Cys Thr | | |
| 100 | 105 | 110 |
| Pro Glu Phe Gln Ala Asn Glu Val Arg Lys Val Lys Lys Phe Glu Gln | | |
| 115 | 120 | 125 |
| Gly Phe Ile Thr Asp Pro Val Val Leu Ser Pro Ser His Thr Val Gly | | |
| 130 | 135 | 140 |
| Asp Val Leu Glu Ala Lys Met Arg His Gly Phe Ser Gly Ile Pro Ile | | |
| 145 | 150 | 155 |
| Thr Glu Thr Gly Thr Met Gly Ser Lys Leu Val Gly Ile Val Thr Ser | | |
| 165 | 170 | 175 |
| Arg Asp Ile Asp Phe Leu Ala Glu Lys Asp His Thr Thr Leu Leu Ser | | |
| 180 | 185 | 190 |
| Glu Val Met Thr Pro Arg Ile Glu Leu Val Val Ala Pro Ala Gly Val | | |
| 195 | 200 | 205 |
| Thr Leu Lys Glu Ala Asn Glu Ile Leu Gln Arg Ser Lys Lys Gly Lys | | |
| 210 | 215 | 220 |
| Leu Pro Ile Val Asn Asp Cys Asp Glu Leu Val Ala Ile Ile Ala Arg | | |
| 225 | 230 | 235 |
| Thr Asp Leu Lys Lys Asn Arg Asp Tyr Pro Leu Ala Ser Lys Asp Ser | | |
| 245 | 250 | 255 |

Gln Lys Gln Leu Leu Cys Gly Ala Ala Val Gly Thr Arg Glu Asp Asp
 260 265 270
 Lys Tyr Arg Leu Asp Leu Leu Thr Gln Ala Gly Val Asp Val Ile Val
 275 280 285
 Leu Asp Ser Ser Gln Gly Asn Ser Val Tyr Gln Ile Ala Met Val His
 290 295 300
 Tyr Ile Lys Gln Lys Tyr Pro His Leu Gln Val Ile Gly Gly Asn Val
 305 310 315 320
 Val Thr Ala Ala Gln Ala Lys Asn Leu Ile Asp Ala Gly Val Asp Gly
 325 330 335
 Leu Arg Val Gly Met Gly Cys Gly Ser Ile Cys Ile Thr Gln Glu Val
 340 345 350
 Met Ala Cys Gly Arg Pro Gln Gly Thr Ala Val Tyr Lys Val Ala Glu
 355 360 365
 Tyr Ala Arg Arg Phe Gly Val Pro Ile Ile Ala Asp Gly Gly Ile Gln
 370 375 380
 Thr Val Gly His Val Val Lys Ala Leu Ala Leu Gly Ala Ser Thr Val
 385 390 395 400
 Met Met Gly Ser Leu Leu Ala Ala Thr Thr Glu Ala Pro Gly Glu Tyr
 405 410 415
 Phe Phe Ser Asp Gly Val Arg Leu Lys Lys Tyr Arg Gly Met Gly Ser
 420 425 430
 Leu Asp Ala Met Glu Lys Ser Ser Ser Ser Gln Lys Arg Tyr Phe Ser
 435 440 445
 Glu Gly Asp Lys Val Lys Ile Ala Gln Gly Val Ser Gly Ser Ile Gln
 450 455 460
 Asp Lys Gly Ser Ile Gln Lys Phe Val Pro Tyr Leu Ile Ala Gly Ile
 465 470 475 480
 Gln His Gly Cys Gln Asp Ile Gly Ala Arg Ser Leu Ser Val Leu Arg

485 490 495
 Ser Met Met Tyr Ser Gly Glu Leu Lys Phe Glu Lys Arg Thr Met Ser
 500 505 510
 Ala Gln Ile Glu Gly Gly Val His Gly Leu His Ser Tyr Glu Lys Arg
 515 520 525
 Leu Tyr
 530

<210> 429

<211> 134

<212> PRT

<213> Homo sapiens

<400> 429

Met Leu Arg Asp Phe Val Thr Thr Arg Pro Ala Leu Gln Glu Ala Leu
 1 5 10 15
 Lys Glu Ala Leu Asn Met Glu Arg Lys Asn Arg Tyr Gln Pro Leu Gln
 20 25 30
 Lys Pro Tyr Gln Asn Met Lys Thr Asn Glu Ala Ile Lys Lys Leu His
 35 40 45
 Gln Leu Met Cys Lys Ile Thr Arg Ser Asn Ser His Ile Thr Ile Leu
 50 55 60
 Thr Leu Ser Val Asn Trp Leu Asn Ala Pro Ile Lys Lys His Arg Leu
 65 70 75 80
 Ala Asn Trp Ile Lys Ser Gln Asp Pro Ser Val Cys Cys Ile Gln Glu
 85 90 95
 Thr His Leu Met Cys Lys Asp Thr His Arg Pro Lys Ile Lys Gly Trp
 100 105 110

Arg Asn Ile Tyr Gln Ala Asn Gly Lys Pro Lys Lys Lys Lys Ser Gly

115

120

125

Gly Cys Asn Pro Ser Leu

130

<210> 430

<211> 505

<212> PRT

<213> Homo sapiens

<400> 430

Met Ala Gly Ala Gln Thr Leu Leu Thr Phe Arg Asp Val Ala Ile Glu

1

5

10

15

Phe Ser Leu Glu Glu Trp Lys Cys Leu Asp Leu Ala Gln Gln Asn Leu

20

25

30

Tyr Arg Asp Val Met Leu Glu Asn Tyr Arg Asn Leu Phe Ser Val Gly

35

40

45

Leu Thr Val Cys Lys Pro Gly Leu Ile Thr Cys Leu Glu Gln Arg Lys

50

55

60

Glu Pro Trp Asn Val Lys Arg Gln Glu Ala Ala Asp Gly His Pro Ala

65

70

75

80

Met Ser Ser His Phe Thr Gln Asp Leu Leu Pro Glu Gln Gly Ile Gln

85

90

95

Asp Ala Phe Pro Lys Arg Ile Leu Arg Gly Tyr Gly Asn Cys Gly Leu

100

105

110

Asp Asn Leu Tyr Leu Arg Lys Asp Trp Glu Ser Leu Asp Glu Cys Lys

115

120

125

Leu Gln Lys Asp Tyr Asn Gly Leu Asn Gln Cys Ser Ser Thr Thr His

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Ser Lys Ile Phe Gln Tyr Asn Lys Tyr Val Lys Ile Phe Asp Asn Phe | | |
| 145 | 150 | 155 |
| Ser Asn Leu His Arg Arg Asn Ile Ser Asn Thr Gly Glu Lys Pro Phe | | |
| 165 | 170 | 175 |
| Lys Cys Gln Glu Cys Gly Lys Ser Phe Gln Met Leu Ser Phe Leu Thr | | |
| 180 | 185 | 190 |
| Glu His Gln Lys Ile His Thr Gly Lys Lys Phe Gln Lys Cys Gly Glu | | |
| 195 | 200 | 205 |
| Cys Gly Lys Thr Phe Ile Gln Cys Ser His Phe Thr Glu Pro Glu Asn | | |
| 210 | 215 | 220 |
| Ile Asp Thr Gly Glu Lys Pro Tyr Lys Cys Gln Glu Cys Asn Asn Val | | |
| 225 | 230 | 235 |
| Ile Lys Thr Cys Ser Val Leu Thr Lys Asn Arg Ile Tyr Ala Gly Gly | | |
| 245 | 250 | 255 |
| Glu His Tyr Arg Cys Glu Glu Phe Gly Lys Val Phe Asn Gln Cys Ser | | |
| 260 | 265 | 270 |
| His Leu Thr Glu His Glu His Gly Thr Glu Glu Lys Pro Phe Lys Cys | | |
| 275 | 280 | 285 |
| Glu Glu Cys Asp Ser Ile Phe Lys Trp Phe Ser Asp Leu Thr Lys His | | |
| 290 | 295 | 300 |
| Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asp Glu Cys Gly | | |
| 305 | 310 | 315 |
| Lys Ala Tyr Thr Gln Ser Ser His Leu Ser Glu His Arg Arg Ile His | | |
| 325 | 330 | 335 |
| Thr Gly Glu Lys Pro Tyr Gln Cys Glu Glu Cys Gly Lys Val Phe Arg | | |
| 340 | 345 | 350 |
| Thr Cys Ser Ser Leu Ser Asn His Lys Arg Thr His Ser Glu Glu Lys | | |
| 355 | 360 | 365 |

Pro Tyr Thr Cys Glu Glu Cys Gly Asn Ile Phe Lys Gln Leu Ser Asp
 370 375 380
 Leu Thr Lys His Lys Lys Thr His Thr Gly Glu Lys Pro Tyr Lys Cys
 385 390 395 400
 Asp Glu Cys Gly Lys Asn Phe Thr Gln Ser Ser Asn Leu Ile Val His
 405 410 415
 Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly
 420 425 430
 Arg Val Phe Met Trp Phe Ser Asp Ile Thr Lys His Lys Lys Thr His
 435 440 445
 Thr Gly Glu Lys Pro Tyr Lys Cys Asp Glu Cys Gly Lys Asn Phe Thr
 450 455 460
 Gln Ser Ser Asn Leu Ile Val His Lys Arg Ile His Thr Gly Glu Lys
 465 470 475 480
 Pro Tyr Lys Cys Glu Lys Cys Gly Lys Ala Phe Thr Gln Phe Ser His
 485 490 495
 Leu Thr Val His Glu Ser Ile His Thr
 500 505

<210> 431

<211> 106

<212> PRT

<213> Homo sapiens

<400> 431

Met Val Ala Pro Arg Lys Ile Arg Trp Cys Val Glu Glu Leu Pro Ser
 1 5 10 15
 His Cys Ser Leu His Ala Phe Leu Ser Ala Arg Cys Glu Gln Gly Arg

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 20 | | 25 | | 30 | | | | | | | | | | |
| Pro | Gly | Thr | Ala | Asp | Gly | Leu | His | Leu | Ser | Asp | Trp | Thr | Ala | Thr | Cys |
| | 35 | | 40 | | 45 | | | | | | | | | | |
| His | Thr | Phe | Ile | Glu | Leu | Ser | Ile | Ser | Thr | Ala | Ala | Val | Leu | Gly | Val |
| | 50 | | 55 | | 60 | | | | | | | | | | |
| Leu | Leu | Gly | Ser | Arg | Asn | Lys | Lys | Phe | Arg | Glu | Ala | Lys | Val | Leu | Gln |
| | 65 | | 70 | | 75 | | | | | | | | | | 80 |
| Gly | Cys | Arg | Gln | Val | Ile | Glu | Pro | Ser | Phe | Ile | Glu | His | Leu | Leu | Ser |
| | | | 85 | | 90 | | | | | | | | | 95 | |
| Ala | Lys | Tyr | Ser | Tyr | Leu | Arg | Tyr | Leu | Val | | | | | | |
| | 100 | | | | 105 | | | | | | | | | | |

<210> 432

<211> 410

<212> PRT

<213> Homo sapiens

<400> 432

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Phe | Val | Trp | Asn | Gln | Gly | Ser | Lys | Tyr | Ser | Gly | Ser | Glu | Val | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Trp | Cys | Pro | Leu | His | Trp | Asn | Ser | Glu | Glu | Leu | Ile | Val | Phe | Trp | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Cys | Val | Leu | Gln | Val | Leu | Asp | Trp | His | Arg | Leu | Ile | Pro | Leu | Thr | Trp |
| | | 35 | | | | | | 40 | | | | | 45 | | |
| Ala | Cys | Met | Ala | Arg | Gln | Thr | Pro | His | Leu | Gly | Glu | Gln | Arg | Arg | Thr |
| | | 50 | | | | | | 55 | | | | | 60 | | |
| Thr | Ala | Ser | Leu | Leu | Arg | Lys | Leu | Thr | Thr | Ala | Ser | Asn | Gly | Gly | Val |
| | | | 65 | | | 70 | | | | | | 75 | | | 80 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Glu | Leu | Ser | Cys | Val | Arg | Ser | Asn | Asn | Tyr | Val | Gln | Glu | Pro |
| | | | | | | 85 | | | | 90 | | | | 95 | |
| Glu | Cys | Arg | Arg | Asn | Leu | Val | Gln | Cys | Leu | Leu | Glu | Lys | Gln | Gly | Thr |
| | | | | | | 100 | | | | 105 | | | | 110 | |
| Pro | Val | Val | Gln | Gly | Ser | Leu | Glu | Leu | Glu | Arg | Val | Met | Ser | Ser | Leu |
| | | | | | | 115 | | | | 120 | | | | 125 | |
| Leu | Asp | Met | Gly | Phe | Ser | Asn | Ala | His | Ile | Asn | Glu | Leu | Leu | Ser | Val |
| | | | | | | 130 | | | | 135 | | | | 140 | |
| Arg | Arg | Gly | Ala | Ser | Leu | Gln | Gln | Leu | Leu | Asp | Ile | Ile | Ser | Glu | Phe |
| | | | | | | 145 | | | | 150 | | | | 155 | |
| Ile | Leu | Leu | Gly | Leu | Asn | Pro | Glu | Pro | Val | Cys | Val | Val | Leu | Lys | Lys |
| | | | | | | 165 | | | | 170 | | | | 175 | |
| Ser | Pro | Gln | Leu | Leu | Lys | Leu | Pro | Ile | Met | Gln | Met | Arg | Lys | Arg | Ser |
| | | | | | | 180 | | | | 185 | | | | 190 | |
| Ser | Tyr | Leu | Gln | Lys | Leu | Gly | Leu | Gly | Glu | Gly | Lys | Leu | Lys | Arg | Val |
| | | | | | | 195 | | | | 200 | | | | 205 | |
| Leu | Tyr | Cys | Cys | Pro | Glu | Ile | Phe | Thr | Met | Arg | Gln | Gln | Asp | Ile | Asn |
| | | | | | | 210 | | | | 215 | | | | 220 | |
| Asp | Thr | Val | Arg | Leu | Leu | Lys | Glu | Lys | Cys | Leu | Phe | Thr | Val | Gln | Gln |
| | | | | | | 225 | | | | 230 | | | | 235 | |
| Val | Thr | Lys | Ile | Leu | His | Ser | Cys | Pro | Ser | Val | Leu | Arg | Glu | Asp | Leu |
| | | | | | | 245 | | | | 250 | | | | 255 | |
| Gly | Gln | Leu | Glu | Tyr | Lys | Phe | Gln | Tyr | Ala | Tyr | Phe | Arg | Met | Gly | Ile |
| | | | | | | 260 | | | | 265 | | | | 270 | |
| Lys | His | Pro | Asp | Ile | Val | Lys | Ser | Glu | Tyr | Leu | Gln | Tyr | Ser | Leu | Thr |
| | | | | | | 275 | | | | 280 | | | | 285 | |
| Lys | Ile | Lys | Gln | Arg | His | Ile | Tyr | Leu | Glu | Arg | Leu | Gly | Arg | Tyr | Gln |
| | | | | | | 290 | | | | 295 | | | | 300 | |
| Thr | Pro | Asp | Lys | Lys | Gly | Gln | Thr | Gln | Ile | Pro | Asn | Pro | Leu | Leu | Lys |

305 310 315 320
 Asp Ile Leu Arg Val Ser Glu Ala Glu Phe Leu Ala Arg Thr Ala Cys
 325 330 335
 Thr Ser Val Glu Glu Phe Gln Val Phe Lys Lys Leu Leu Ala Arg Glu
 340 345 350
 Glu Glu Glu Ser Glu Ser Ser Thr Ser Asp Asp Lys Arg Ala Ser Leu
 355 360 365
 Asp Glu Asp Glu Asp Asp Asp Asp Glu Glu Asp Asn Asp Glu Asp Asp
 370 375 380
 Asn Asp Glu Asp Asp Asp Asp Glu Asp Asp Asp Glu Ala Glu Asp Asn
 385 390 395 400
 Asp Glu Asp Glu Asp Asp Asp Glu Glu Glu
 405 410

<210> 433

<211> 340

<212> PRT

<213> Homo sapiens

<400> 433

Met Ala Met Gln Met Gln Leu Glu Ala Asn Ala Asp Thr Ser Val Glu
 1 5 10 15
 Glu Glu Ser Phe Gly Pro Gln Pro Ile Ser Arg Leu Glu Gln Cys Gly
 20 25 30
 Ile Asn Ala Asn Asp Val Lys Lys Leu Glu Glu Ala Gly Phe His Thr
 35 40 45
 Val Glu Ala Val Ala Tyr Ala Pro Lys Lys Glu Leu Ile Asn Ile Lys
 50 55 60

Gly Ile Ser Glu Ala Lys Ala Asp Lys Ile Leu Thr Glu Ser Arg Ser
65 70 75 80
Val Ala Arg Leu Glu Cys Asn Ser Val Ile Leu Val Tyr Cys Thr Leu
85 90 95
Arg Leu Ser Gly Ser Ser Asp Ser Pro Ala Ser Ala Ser Arg Val Val
100 105 110
Gly Thr Thr Gly Gly Ile Glu Thr Gly Ser Ile Thr Glu Met Phe Gly
115 120 125
Glu Phe Arg Thr Gly Lys Thr Gln Ile Cys His Thr Leu Ala Val Thr
130 135 140
Cys Gln Leu Pro Ile Asp Arg Gly Gly Gly Glu Gly Lys Ala Met Tyr
145 150 155 160
Ile Asp Thr Glu Gly Thr Phe Arg Pro Glu Arg Leu Leu Ala Val Ala
165 170 175
Glu Arg Tyr Gly Leu Ser Gly Ser Asp Val Leu Asp Asn Val Ala Tyr
180 185 190
Ala Arg Ala Phe Asn Thr Asp His Gln Thr Gln Leu Leu Tyr Gln Ala
195 200 205
Ser Ala Met Met Val Glu Ser Arg Tyr Ala Leu Leu Ile Val Asp Ser
210 215 220
Ala Thr Ala Leu Tyr Arg Thr Asp Tyr Ser Gly Arg Gly Glu Leu Ser
225 230 235 240
Ala Arg Gln Met His Leu Ala Arg Phe Leu Arg Met Leu Leu Arg Leu
245 250 255
Ala Asp Glu Phe Gly Val Ala Val Val Ile Thr Asn Gln Val Val Ala
260 265 270
Gln Val Asp Gly Ala Ala Met Phe Ala Ala Asp Pro Lys Lys Pro Ile
275 280 285
Gly Gly Asn Ile Ile Ala His Ala Ser Thr Thr Arg Leu Tyr Leu Arg

290 295 300
 Lys Gly Arg Gly Glu Thr Arg Ile Cys Lys Ile Tyr Asp Ser Pro Cys
 305 310 315 320
 Leu Pro Glu Ala Glu Ala Met Phe Ala Ile Asn Ala Asp Gly Val Gly
 325 330 335
 Asp Ala Lys Asp
 340

<210> 434

<211> 698

<212> PRT

<213> Homo sapiens

<400> 434

Met Glu Thr Arg Gly Leu Ala Asp Ser Gly Gln Gly Ser Phe Thr Gly
 1 5 10 15
 Gln Gly Ile Ala Arg Phe Gly Arg Ile Gln Lys Lys Ser Gln Pro Glu
 20 25 30
 Lys Val Val Arg Ala Ala Ser Arg Gly Arg Pro Leu Ile Gly Trp Thr
 35 40 45
 Gln Trp Cys Ala Glu Asp Gly Gly Asp Glu Ser Glu Met Ala Leu Ala
 50 55 60
 Gly Ser Pro Gly Cys Ser Ser Gly Pro Gln Gly Arg Leu Ser Arg Leu
 65 70 75 80
 Ile Phe Leu Leu Arg Arg Trp Ala Ala Arg His Val His His Gln Asp
 85 90 95
 Gln Gly Pro Asp Ser Phe Pro Asp Arg Phe Arg Gly Ala Glu Leu Lys
 100 105 110

Glu Val Ser Ser Gln Glu Ser Asn Ala Gln Ala Asn Val Gly Ser Gln
 115 120 125
 Glu Pro Ala Asp Arg Gly Arg Ser Ala Trp Pro Leu Ala Lys Cys Asn
 130 135 140
 Thr Asn Thr Ser Asn Asn Thr Glu Glu Glu Lys Lys Thr Lys Lys Lys
 145 150 155 160
 Asp Ala Ile Val Val Asp Pro Ser Ser Asn Leu Tyr Tyr Arg Trp Leu
 165 170 175
 Thr Ala Ile Ala Leu Pro Val Phe His Asn Trp Tyr Leu Leu Ile Cys
 180 185 190
 Arg Ala Cys Phe Asp Glu Leu Gln Ser Glu Tyr Leu Met Leu Trp Leu
 195 200 205
 Val Leu Asp Tyr Ser Ala Asp Val Leu Tyr Val Leu Asp Val Leu Val
 210 215 220
 Arg Ala Arg Thr Gly Phe Leu Glu Gln Gly Leu Met Val Ser Asp Thr
 225 230 235 240
 Asn Arg Leu Trp Gln His Tyr Lys Thr Thr Thr Gln Phe Lys Leu Asp
 245 250 255
 Val Leu Ser Leu Val Pro Thr Asp Leu Ala Tyr Leu Lys Val Gly Thr
 260 265 270
 Asn Tyr Pro Glu Val Arg Phe Asn Arg Leu Leu Lys Phe Ser Arg Leu
 275 280 285
 Phe Glu Phe Phe Asp Arg Thr Glu Thr Arg Thr Asn Tyr Pro Asn Met
 290 295 300
 Phe Arg Ile Gly Asn Leu Val Leu Tyr Ile Leu Ile Ile Ile His Trp
 305 310 315 320
 Asn Ala Cys Ile Tyr Phe Ala Ile Ser Lys Phe Ile Gly Phe Gly Thr
 325 330 335
 Asp Ser Trp Val Tyr Pro Asn Ile Ser Ile Pro Glu His Gly Arg Leu

| | | | |
|---|-----|-----|-----|
| 340 | 345 | 350 | |
| Ser Arg Lys Tyr Ile Tyr Ser Leu Tyr Trp Ser Thr Leu Thr Leu Thr | | | |
| 355 | 360 | 365 | |
| Thr Ile Gly Glu Thr Pro Pro Pro Val Lys Asp Glu Glu Tyr Leu Phe | | | |
| 370 | 375 | 380 | |
| Val Val Val Asp Phe Leu Val Gly Val Leu Ile Phe Ala Thr Ile Val | | | |
| 385 | 390 | 395 | 400 |
| Gly Asn Val Gly Ser Met Ile Ser Asn Met Asn Ala Ser Arg Ala Glu | | | |
| 405 | 410 | 415 | |
| Phe Gln Ala Lys Ile Asp Ser Ile Lys Gln Tyr Met Gln Phe Arg Lys | | | |
| 420 | 425 | 430 | |
| Val Thr Lys Asp Leu Glu Thr Arg Val Ile Arg Trp Phe Asp Tyr Leu | | | |
| 435 | 440 | 445 | |
| Trp Ala Asn Lys Lys Thr Val Asp Glu Lys Glu Val Leu Lys Ser Leu | | | |
| 450 | 455 | 460 | |
| Pro Asp Lys Leu Lys Ala Glu Ile Ala Ile Asn Val His Leu Asp Thr | | | |
| 465 | 470 | 475 | 480 |
| Leu Lys Lys Val Arg Ile Phe Gln Asp Cys Glu Ala Gly Leu Leu Val | | | |
| 485 | 490 | 495 | |
| Glu Leu Val Leu Lys Leu Arg Pro Thr Val Phe Ser Pro Gly Asp Tyr | | | |
| 500 | 505 | 510 | |
| Ile Cys Lys Lys Gly Asp Ile Gly Lys Glu Met Tyr Ile Ile Asn Glu | | | |
| 515 | 520 | 525 | |
| Gly Lys Leu Ala Val Val Ala Asp Asp Gly Val Thr Gln Phe Val Val | | | |
| 530 | 535 | 540 | |
| Leu Ser Asp Gly Ser Tyr Phe Gly Glu Ile Ser Ile Leu Asn Ile Lys | | | |
| 545 | 550 | 555 | 560 |
| Gly Ser Lys Ser Gly Asn Arg Arg Thr Ala Asn Ile Arg Ser Ile Gly | | | |
| 565 | 570 | 575 | |

Tyr Ser Asp Leu Phe Cys Leu Ser Lys Asp Asp Leu Met Glu Ala Leu
 580 585 590
 Thr Glu Tyr Pro Glu Ala Lys Lys Ala Leu Glu Glu Lys Gly Arg Gln
 595 600 605
 Ile Leu Met Lys Asp Asn Leu Ile Asp Glu Glu Leu Ala Arg Ala Gly
 610 615 620
 Ala Asp Pro Lys Asp Leu Glu Glu Lys Val Glu Gln Leu Gly Ser Ser
 625 630 635 640
 Leu Asp Thr Leu Gln Thr Arg Phe Ala Arg Leu Leu Ala Glu Tyr Asn
 645 650 655
 Ala Thr Gln Met Lys Met Lys Gln Arg Leu Ser Gln Leu Glu Ser Gln
 660 665 670
 Val Lys Gly Gly Gly Asp Lys Pro Leu Ala Asp Gly Glu Val Pro Gly
 675 680 685
 Asp Ala Thr Lys Thr Glu Asp Lys Gln Gln
 690 695

<210> 435

<211> 544

<212> PRT

<213> Homo sapiens

<400> 435

Met Asp Gly Leu Asp Asn Arg Gly Glu Ile Val Val Ile Gly Ala Thr
 1 5 10 15
 Asn Arg Leu Asp Ser Ile Asp Pro Ala Leu Arg Arg Pro Gly Arg Phe
 20 25 30
 Asp Arg Glu Phe Leu Phe Asn Leu Pro Asp Gln Lys Ala Arg Lys His

| | | |
|---|-----|-----|
| 35 | 40 | 45 |
| Ile Leu Gln Ile His Thr Arg Asp Trp Asn Pro Lys Leu Ser Asp Ala | | |
| 50 | 55 | 60 |
| Phe Leu Gly Glu Leu Ala Glu Lys Cys Val Gly Tyr Cys Gly Ala Asp | | |
| 65 | 70 | 75 |
| Ile Lys Ala Leu Cys Thr Glu Ala Ala Leu Ile Ala Leu Arg Arg Arg | | |
| 85 | 90 | 95 |
| Tyr Pro Gln Ile Tyr Ala Ser Ser His Lys Leu Gln Leu Asp Val Ser | | |
| 100 | 105 | 110 |
| Ser Ile Val Leu Ser Ala Gln Asp Phe Tyr His Ala Met Gln Asn Ile | | |
| 115 | 120 | 125 |
| Val Pro Ala Ser Gln Arg Ala Val Met Ser Ser Gly His Ala Leu Ser | | |
| 130 | 135 | 140 |
| Pro Ile Ile Arg Pro Leu Leu Glu Arg Ser Phe Asn Asn Ile Leu Ala | | |
| 145 | 150 | 155 |
| Val Leu Gln Lys Val Phe Pro His Ala Glu Ile Ser Gln Ser Asp Lys | | |
| 165 | 170 | 175 |
| Lys Glu Asp Ile Glu Thr Leu Ile Leu Glu Asp Ser Glu Asp Glu Asn | | |
| 180 | 185 | 190 |
| Ala Leu Ser Ile Phe Glu Thr Asn Cys His Ser Gly Ser Pro Lys Lys | | |
| 195 | 200 | 205 |
| Gln Ser Ser Ser Ala Ala Ile His Lys Pro Tyr Leu His Phe Thr Met | | |
| 210 | 215 | 220 |
| Ser Pro Tyr His Gln Pro Thr Ser Tyr Arg Pro Arg Leu Leu Leu Ser | | |
| 225 | 230 | 235 |
| Gly Glu Arg Gly Ser Gly Gln Thr Ser His Leu Ala Pro Ala Leu Leu | | |
| 245 | 250 | 255 |
| His Thr Leu Glu Arg Phe Ser Val His Arg Leu Asp Leu Pro Ala Leu | | |
| 260 | 265 | 270 |

Tyr Ser Val Ser Ala Lys Thr Pro Glu Glu Ser Cys Ala Gln Ile Phe
 275 280 285
 Arg Glu Ala Arg Arg Thr Val Pro Ser Ile Val Tyr Met Pro His Ile
 290 295 300
 Gly Asp Trp Trp Glu Ala Val Ser Glu Thr Val Arg Ala Thr Phe Leu
 305 310 315 320
 Thr Leu Leu Gln Asp Ile Pro Ser Phe Ser Pro Ile Phe Leu Leu Ser
 325 330 335
 Thr Ser Glu Thr Met Tyr Ser Glu Leu Pro Glu Glu Val Lys Cys Ile
 340 345 350
 Phe Arg Ile Gln Tyr Glu Glu Val Leu Tyr Ile Gln Arg Pro Ile Glu
 355 360 365
 Glu Asp Arg Arg Lys Phe Phe Gln Glu Leu Ile Leu Asn Gln Ala Ser
 370 375 380
 Met Ala Pro Pro Arg Arg Lys His Ala Ala Leu Cys Ala Met Glu Val
 385 390 395 400
 Leu Pro Leu Ala Leu Pro Ser Pro Pro Arg Gln Leu Ser Glu Ser Glu
 405 410 415
 Lys Ser Arg Met Glu Asp Gln Glu Glu Asn Thr Leu Arg Glu Leu Arg
 420 425 430
 Leu Phe Leu Arg Asp Val Thr Lys Arg Leu Ala Thr Asp Lys Arg Phe
 435 440 445
 Asn Ile Phe Ser Lys Pro Val Asp Ile Glu Glu Val Ser Asp Tyr Leu
 450 455 460
 Glu Val Ile Lys Glu Pro Met Asp Leu Ser Thr Val Ile Thr Lys Ile
 465 470 475 480
 Asp Lys His Asn Tyr Leu Thr Ala Lys Asp Phe Leu Lys Asp Ile Asp
 485 490 495
 Leu Ile Cys Ser Asn Ala Leu Glu Tyr Asn Pro Asp Lys Asp Pro Gly

500 505 510
Asp Lys Ile Ile Arg His Arg Ala Cys Thr Leu Lys Asp Thr Ala His
515 520 525
Ala Ile Ile Ala Ala Glu Leu Asp Pro Glu Phe Asn Lys Leu Cys Glu
530 535 540

<210> 436

<211> 334

<212> PRT

<213> Homo sapiens

<400> 436

Met Val Gly Gln Gly Cys Ser Leu Glu Pro Arg Leu Asp Leu Arg Pro
1 5 10 15
Leu Gly Asn Pro Arg Ser Lys Gln Ser Arg His Gln Ser Trp Val Trp
20 25 30
Glu Arg Gln Glu Gly Glu Arg Asn Gly Gly Ser Lys Glu Gly Lys Glu
35 40 45
Gly Gly Arg Gly Gly Ser Lys Thr Val Ile Pro Ile Pro Ile Ser Asp
50 55 60
Leu Glu Leu Ala Ser Thr Pro Val His Pro Cys Arg Gly Gly Pro Ser
65 70 75 80
Pro Gln Leu Leu Pro Arg Glu Tyr Gly Gly Gly Val Gly Ile Leu Trp
85 90 95
Leu Ser Ser Leu Pro Leu Leu Cys Arg Leu Met Leu Gly Phe Met Gly
100 105 110
Val Thr Ala Leu Leu Ser Met Trp Ile Ser Asn Thr Ala Thr Thr Ala
115 120 125

Met Met Val Pro Ile Val Glu Ala Ile Leu Gln Gln Met Glu Ala Thr
 130 135 140
 Ser Ala Ala Thr Glu Ala Gly Leu Glu Leu Val Asp Lys Gly Lys Ala
 145 150 155 160
 Lys Glu Leu Pro Gly Ser Gln Val Ile Phe Glu Gly Pro Thr Leu Gly
 165 170 175
 Gln Gln Glu Asp Gln Glu Arg Lys Arg Leu Cys Lys Ala Met Thr Leu
 180 185 190
 Cys Ile Cys Tyr Ala Ala Ser Ile Gly Gly Thr Ala Thr Leu Thr Gly
 195 200 205
 Thr Gly Pro Asn Val Val Leu Leu Gly Gln Met Asn Glu Leu Phe Pro
 210 215 220
 Asp Ser Lys Asp Leu Val Asn Phe Ala Ser Trp Phe Ala Phe Ala Phe
 225 230 235 240
 Pro Asn Met Leu Val Met Leu Leu Phe Ala Trp Leu Trp Leu Gln Phe
 245 250 255
 Val Tyr Met Arg Phe Asn Phe Lys Lys Ser Trp Gly Cys Gly Leu Glu
 260 265 270
 Ser Lys Lys Asn Glu Lys Ala Ala Leu Lys Val Leu Gln Glu Glu Tyr
 275 280 285
 Arg Lys Leu Gly Pro Leu Ser Phe Ala Glu Ile Asn Val Leu Ile Cys
 290 295 300
 Phe Phe Leu Leu Val Ile Leu Trp Phe Ser Arg Asp Pro Gly Phe Met
 305 310 315 320
 Pro Gly Trp Leu Thr Val Ala Trp Val Glu Gly Glu Thr Lys
 325 330

<210> 437

<211> 451

<212> PRT

<213> Homo sapiens

<400> 437

Met Asn Lys Ala Pro Gln Ser Thr Gly Pro Pro Pro Ala Pro Ser Pro

1 5 10 15

Gly Leu Pro Gln Pro Ala Phe Pro Pro Gly Gln Thr Ala Pro Val Val

20 25 30

Phe Ser Thr Pro Gln Ala Thr Gln Met Asn Thr Pro Ser Gln Pro Arg

35 40 45

Gln His Phe Tyr Pro Ser Arg Ala Gln Pro Pro Ser Ser Ala Ala Ser

50 55 60

Arg Val Gln Ser Ala Ala Pro Ala Arg Pro Gly Pro Ala Ala Leu Pro

65 70 75 80

Pro Val Ser Pro Leu Lys Ala Ala Leu Ser Glu Glu Glu Leu Glu Lys

85 90 95

Lys Ser Lys Ala Ile Ile Glu Glu Tyr Leu His Leu Asn Asp Met Lys

100 105 110

Glu Ala Val Gln Cys Val Gln Glu Leu Ala Ser Pro Ser Leu Leu Phe

115 120 125

Ile Phe Val Arg His Gly Val Glu Ser Thr Leu Glu Arg Ser Ala Ile

130 135 140

Ala Arg Glu His Met Gly Gln Leu Leu His Gln Leu Leu Cys Ala Gly

145 150 155 160

His Leu Ser Thr Ala Gln Tyr Tyr Gln Gly Leu Tyr Glu Ile Leu Glu

165 170 175

Leu Ala Glu Asp Met Glu Ile Asp Ile Pro His Val Trp Leu Tyr Leu

180 185 190

Ala Glu Leu Val Thr Pro Ile Leu Gln Glu Gly Gly Val Pro Met Gly
 195 200 205
 Glu Leu Phe Arg Glu Ile Thr Lys Pro Leu Arg Pro Leu Gly Lys Ala
 210 215 220
 Ala Ser Leu Leu Leu Glu Ile Leu Gly Leu Leu Cys Lys Ser Met Gly
 225 230 235 240
 Pro Lys Lys Val Gly Thr Leu Trp Arg Glu Ala Gly Leu Ser Trp Lys
 245 250 255
 Glu Phe Leu Pro Glu Gly Gln Asp Ile Gly Ala Phe Val Ala Glu Gln
 260 265 270
 Lys Val Glu Tyr Thr Leu Gly Glu Glu Ser Glu Ala Pro Gly Gln Arg
 275 280 285
 Ala Leu Pro Ser Glu Glu Leu Asn Arg Gln Leu Glu Lys Leu Leu Lys
 290 295 300
 Glu Gly Ser Ser Asn Gln Arg Val Phe Asp Trp Ile Glu Ala Asn Leu
 305 310 315 320
 Ser Glu Gln Gln Ile Val Ser Asn Thr Leu Val Arg Ala Leu Met Thr
 325 330 335
 Ala Val Cys Tyr Ser Ala Ile Ile Phe Glu Thr Pro Leu Arg Val Asp
 340 345 350
 Val Ala Val Leu Lys Ala Arg Ala Lys Leu Leu Gln Lys Tyr Leu Cys
 355 360 365
 Asp Glu Gln Lys Glu Leu Gln Ala Leu Tyr Ala Leu Gln Ala Leu Val
 370 375 380
 Val Thr Leu Glu Gln Pro Pro Asn Leu Leu Arg Met Phe Phe Asp Ala
 385 390 395 400
 Leu Tyr Asp Glu Asp Val Val Lys Glu Asp Ala Phe Tyr Ser Trp Glu
 405 410 415
 Ser Ser Lys Asp Pro Ala Glu Gln Gln Gly Lys Gly Val Ala Leu Lys

420 425 430
 Ser Val Thr Ala Phe Phe Lys Trp Leu Arg Glu Ala Glu Glu Glu Ser
 435 440 445
 Asp His Asn
 450

<210> 438

<211> 694

<212> PRT

<213> Homo sapiens

<400> 438

Met Glu Arg Ala Met Glu Gln Leu Asn Arg Leu Thr Arg Ser Leu Arg
 1 5 10 15
 Arg Ala Arg Thr Val Glu Leu Pro Glu Asp Asn Glu Thr Ala Val Tyr
 20 25 30
 Thr Leu Met Pro Met Val Met Ala Asp Gln His Arg Ser Val Ser Glu
 35 40 45
 Leu Leu Ser Asn Ser Lys Phe Asp Val Asn Tyr Ala Phe Gly Arg Val
 50 55 60
 Lys Arg Ser Leu Leu His Ile Ala Ala Asn Cys Gly Ser Val Glu Cys
 65 70 75 80
 Leu Val Leu Leu Leu Lys Lys Gly Ala Asn Pro Asn Tyr Gln Asp Ile
 85 90 95
 Ser Gly Cys Thr Pro Leu His Leu Ala Ala Arg Asn Gly Gln Lys Lys
 100 105 110
 Cys Met Ser Lys Leu Leu Glu Tyr Ser Ala Asp Val Asn Ile Cys Asn
 115 120 125

Asn Glu Gly Pro Thr Ala Ile His Trp Leu Ala Val Asn Gly Arg Thr
130 135 140
Glu Leu Leu His Asp Leu Val Gln His Val Ser Asp Val Asp Val Glu
145 150 155 160
Asp Ala Met Gly Gln Thr Ala Leu His Val Ala Cys Gln Asn Gly His
165 170 175
Lys Thr Thr Val Gln Cys Leu Leu Asp Ser Gly Ala Asp Ile Asn Arg
180 185 190
Pro Asn Val Ser Gly Ala Thr Pro Leu Tyr Phe Ala Cys Ser His Gly
195 200 205
Gln Arg Asp Thr Ala Gln Ile Leu Leu Leu Arg Gly Ala Lys Tyr Leu
210 215 220
Pro Asp Lys Asn Gly Val Thr Pro Leu Asp Leu Cys Val Gln Gly Gly
225 230 235 240
Tyr Gly Glu Thr Cys Glu Val Leu Ile Gln Tyr His Pro Arg Leu Phe
245 250 255
Gln Thr Ile Ile Gln Met Thr Gln Asn Glu Asp Leu Arg Glu Asn Met
260 265 270
Leu Arg Gln Val Leu Glu His Leu Ser Gln Gln Ser Glu Ser Gln Tyr
275 280 285
Leu Lys Ile Leu Thr Ser Leu Ala Glu Val Ser Thr Thr Asn Gly His
290 295 300
Lys Leu Leu Ser Leu Ser Ser Asn Tyr Asp Ala Gln Met Lys Ser Leu
305 310 315 320
Leu Arg Ile Val Arg Met Phe Cys His Val Phe Arg Ile Gly Pro Ser
325 330 335
Ser Pro Ser Asn Gly Ile Asp Met Gly Tyr Asn Gly Asn Lys Thr Pro
340 345 350
Arg Ser Gln Val Phe Lys Pro Leu Glu Leu Leu Trp His Ser Leu Asp

355 360 365
Glu Trp Leu Val Leu Ile Ala Thr Glu Leu Met Lys Asn Lys Arg Asp
370 375 380
Ser Thr Glu Ile Thr Ser Ile Leu Leu Lys Gln Lys Gly Gln Asp Gln
385 390 395 400
Asp Ala Ala Ser Ile Pro Pro Phe Glu Pro Pro Gly Pro Gly Ser Tyr
405 410 415
Glu Asn Leu Ser Thr Gly Thr Arg Glu Ser Lys Pro Asp Ala Leu Ala
420 425 430
Gly Arg Gln Glu Ala Ser Ala Asp Cys Gln Asp Val Ile Ser Met Thr
435 440 445
Ala Asn Arg Leu Ser Ala Val Ile Gln Ala Phe Tyr Met Cys Cys Ser
450 455 460
Cys Gln Met Pro Pro Gly Met Thr Ser Pro Arg Phe Ile Glu Phe Val
465 470 475 480
Cys Lys His Asp Glu Val Leu Lys Cys Phe Val Asn Arg Asn Pro Lys
485 490 495
Ile Ile Phe Asp His Phe His Phe Leu Leu Glu Cys Pro Glu Leu Met
500 505 510
Ser Arg Phe Met His Ile Ile Lys Ala Gln Ala Glu Tyr Val Gln Leu
515 520 525
Val Thr Glu Leu Arg Met Thr Arg Ala Ile Gln Pro Gln Ile Asn Ala
530 535 540
Phe Leu Gln Gly Phe His Met Phe Ile Pro Pro Ser Leu Ile Gln Leu
545 550 555 560
Phe Asp Glu Tyr Glu Leu Glu Leu Leu Leu Ser Gly Met Pro Glu Ile
565 570 575
Asp Val Ser Asp Trp Ile Lys Asn Thr Glu Tyr Thr Ser Gly Tyr Glu
580 585 590

Arg Glu Asp Pro Val Ile Gln Trp Phe Trp Glu Val Val Glu Asp Ile
 595 600 605
 Thr Gln Glu Glu Arg Val Leu Leu Leu Gln Phe Val Thr Gly Ser Ser
 610 615 620
 Arg Val Pro His Gly Gly Phe Ala Asn Ile Met Gly Gly Ser Gly Leu
 625 630 635 640
 Gln Asn Phe Thr Ile Ala Ala Val Pro Tyr Thr Pro Asn Leu Leu Pro
 645 650 655
 Thr Ser Ser Thr Cys Ile Asn Met Leu Lys Leu Pro Glu Tyr Pro Ser
 660 665 670
 Lys Glu Ile Leu Lys Asp Arg Leu Leu Val Ala Leu His Cys Gly Ser
 675 680 685
 Tyr Gly Tyr Thr Met Ala
 690

<210> 439

<211> 649

<212> PRT

<213> Homo sapiens

<400> 439

Met Pro Lys Ala Glu Ala Asn Leu Gly Gly Leu Ser Ser Leu Val Val
 1 5 10 15
 Asn Thr Pro Ile Thr Ser Val Ser Leu Ser His Ser Ser Ser Glu Ser
 20 25 30
 Ser Lys Met Ser Glu Ser Lys Asp Gln Glu Asn Asn Cys Glu Arg Pro
 35 40 45
 Lys Glu Ser Asn Val Leu His Pro Asn Gly Glu Cys Pro Val Lys Ser

50 55 60
Glu Pro Thr Glu Pro Gly Asp Glu Asp Glu Glu Asp Ala Tyr Ser Asn
65 70 75 80
Glu Leu Asp Asp Glu Glu Val Leu Gly Glu Leu Thr Asp Ser Ile Gly
85 90 95
Asn Lys Asp Phe Pro Leu Leu Asn Gln Ser Ile Ser Pro Leu Ser Ser
100 105 110
Ser Val Leu Lys Phe Ile Glu Lys Gly Thr Ser Ser Ser Ser Ala Thr
115 120 125
Val Ser Asp Asp Thr Glu Lys Lys Lys Gln Thr Ala Ala Val Arg Ala
130 135 140
Ser Gly Ser Val Ala Ser Asn Tyr Gly Ile Ser Gly Lys Asp Phe Ala
145 150 155 160
Asp Ala Ser Ala Ser Lys Asp Ser Ala Thr Ala Ala His Pro Ser Glu
165 170 175
Ile Ala Arg Gly Asp Glu Asp Ser Ser Ala Thr Pro His Gln His Gly
180 185 190
Phe Thr Pro Ser Thr Pro Gly Thr Pro Gly Pro Gly Gly Asp Gly Ser
195 200 205
Pro Gly Ser Gly Ile Glu Cys Pro Lys Cys Asp Thr Val Leu Gly Ser
210 215 220
Ser Arg Ser Leu Gly Gly His Met Thr Met Met His Ser Arg Asn Ser
225 230 235 240
Cys Lys Thr Leu Lys Cys Pro Lys Cys Asn Trp His Tyr Lys Tyr Gln
245 250 255
Gln Thr Leu Glu Ala His Met Lys Glu Lys His Pro Glu Pro Gly Gly
260 265 270
Ser Cys Val Tyr Cys Lys Thr Gly Gln Pro His Pro Arg Leu Ala Arg
275 280 285

Gly Glu Ser Tyr Thr Cys Gly Tyr Lys Pro Phe Arg Cys Glu Val Cys
290 295 300
Asn Tyr Ser Thr Thr Thr Lys Gly Asn Leu Ser Ile His Met Gln Ser
305 310 315 320
Asp Lys His Leu Asn Asn Val Gln Asn Leu Gln Asn Gly Asn Gly Glu
325 330 335
Gln Val Phe Gly His Ser Ala Pro Ala Pro Asn Thr Ser Leu Ser Gly
340 345 350
Cys Gly Thr Pro Ser Pro Ser Lys Pro Lys Gln Lys Pro Thr Trp Arg
355 360 365
Cys Glu Val Cys Asp Tyr Glu Thr Asn Val Ala Arg Asn Leu Arg Ile
370 375 380
His Met Thr Ser Glu Lys His Met His Asn Met Met Leu Leu Gln Gln
385 390 395 400
Asn Met Lys Gln Ile Gln His Asn Leu His Leu Gly Leu Ala Pro Ala
405 410 415
Glu Ala Glu Leu Tyr Gln Tyr Tyr Leu Ala Gln Asn Ile Gly Leu Thr
420 425 430
Gly Met Lys Leu Glu Asn Pro Ala Asp Pro Gln Leu Met Ile Asn Pro
435 440 445
Phe Gln Leu Asp Pro Ala Thr Ala Ala Ala Leu Ala Pro Gly Leu Gly
450 455 460
Glu Leu Ser Pro Tyr Ile Ser Asp Pro Ala Leu Lys Leu Phe Gln Cys
465 470 475 480
Ala Val Cys Asn Lys Phe Thr Ser Asp Ser Leu Glu Ala Leu Ser Val
485 490 495
His Val Ser Ser Glu Arg Ser Leu Pro Glu Glu Glu Trp Arg Ala Val
500 505 510
Ile Gly Asp Ile Tyr Gln Cys Lys Leu Cys Asn Tyr Asn Thr Gln Leu

[illegible]

<210> 440

<211> 808

<212> PRT

<213> Homo sapiens

<400> 440

Met Leu Glu Gly His Glu Ser Tyr Asp Thr Glu Asn Phe Tyr Phe Arg
1 5 10 15
Glu Ile Arg Lys Asn Leu Gln Glu Val Asp Phe Gln Trp Lys Asp Gly
20 25 30

Glu Ile Asn Tyr Lys Glu Gly Pro Met Thr His Lys Asn Asn Leu Thr
 35 40 45
 Gly Gln Arg Val Arg His Ser Gln Gly Asp Val Glu Asn Lys His Met
 50 55 60
 Glu Asn Gln Leu Ile Leu Arg Phe Gln Ser Gly Leu Gly Glu Leu Gln
 65 70 75 80
 Lys Phe Gln Thr Ala Glu Lys Ile Tyr Gly Cys Asn Gln Ile Glu Arg
 85 90 95
 Thr Val Asn Asn Cys Phe Leu Ala Ser Pro Leu Gln Arg Ile Phe Pro
 100 105 110
 Gly Val Gln Thr Asn Ile Ser Arg Lys Tyr Gly Asn Asp Phe Leu Gln
 115 120 125
 Leu Ser Leu Pro Thr Gln Asp Glu Lys Thr His Ile Arg Glu Lys Pro
 130 135 140
 Tyr Ile Gly Asn Glu Cys Gly Lys Ala Phe Arg Val Ser Ser Ser Leu
 145 150 155 160
 Ile Asn His Gln Met Ile His Thr Thr Glu Lys Pro Tyr Arg Cys Asn
 165 170 175
 Glu Ser Gly Lys Ala Phe His Arg Gly Ser Leu Leu Thr Val His Gln
 180 185 190
 Ile Val His Thr Arg Gly Lys Pro Tyr Gln Cys Asp Val Cys Gly Arg
 195 200 205
 Ile Phe Arg Gln Asn Ser Asp Leu Val Asn His Arg Arg Ser His Thr
 210 215 220
 Gly Asp Lys Pro Tyr Ile Cys Asn Glu Cys Gly Lys Ser Phe Ser Lys
 225 230 235 240
 Ser Ser His Leu Ala Val His Gln Arg Ile His Thr Gly Glu Lys Pro
 245 250 255
 Tyr Lys Cys Asn Arg Cys Gly Lys Cys Phe Ser Gln Ser Ser Ser Leu

| | | |
|---|-----|-----|
| 260 | 265 | 270 |
| Ala Thr His Gln Thr Val His Thr Gly Asp Lys Pro Tyr Lys Cys Asn | | |
| 275 | 280 | 285 |
| Glu Cys Gly Lys Thr Phe Lys Arg Asn Ser Ser Leu Thr Ala His His | | |
| 290 | 295 | 300 |
| Ile Ile His Ala Gly Lys Lys Pro Tyr Thr Cys Asp Val Cys Gly Lys | | |
| 305 | 310 | 315 |
| Val Phe Tyr Gln Asn Ser Gln Leu Val Arg His Gln Ile Ile His Thr | | |
| 325 | 330 | 335 |
| Gly Glu Thr Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Phe Gln | | |
| 340 | 345 | 350 |
| Arg Ser Arg Leu Ala Gly His Arg Arg Ile His Thr Gly Glu Lys Pro | | |
| 355 | 360 | 365 |
| Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Ser Gln His Ser His Leu | | |
| 370 | 375 | 380 |
| Ala Val His Gln Arg Val His Thr Gly Glu Lys Pro Tyr Lys Cys Asn | | |
| 385 | 390 | 395 |
| Glu Cys Gly Lys Ala Phe Asn Trp Gly Ser Leu Leu Thr Val His Gln | | |
| 405 | 410 | 415 |
| Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Val Cys Gly Lys | | |
| 420 | 425 | 430 |
| Val Phe Asn Tyr Gly Gly Tyr Leu Ser Val His Met Arg Cys His Thr | | |
| 435 | 440 | 445 |
| Gly Glu Lys Pro Leu His Cys Asn Lys Cys Gly Met Val Phe Thr Tyr | | |
| 450 | 455 | 460 |
| Tyr Ser Cys Leu Ala Arg His Gln Arg Met His Thr Gly Glu Lys Pro | | |
| 465 | 470 | 475 |
| Tyr Lys Cys Asn Val Cys Gly Lys Val Phe Ile Asp Ser Gly Asn Leu | | |
| 485 | 490 | 495 |

Ser Ile His Arg Arg Ser His Thr Gly Glu Lys Pro Phe Gln Cys Asn
500 505 510
Glu Cys Gly Lys Val Phe Ser Tyr Tyr Ser Cys Leu Ala Arg His Arg
515 520 525
Lys Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Asp Cys Gly Lys
530 535 540
Ala Tyr Thr Gln Arg Ser Ser Leu Thr Lys His Leu Val Ile His Thr
545 550 555 560
Gly Glu Asn Pro Tyr His Cys Asn Glu Phe Gly Glu Ala Phe Ile Gln
565 570 575
Ser Ser Lys Leu Ala Arg Tyr His Arg Asn Pro Thr Gly Glu Lys Pro
580 585 590
His Lys Cys Ser Glu Cys Gly Arg Thr Phe Ser His Lys Thr Ser Leu
595 600 605
Val Tyr His Gln Arg Arg His Thr Gly Glu Met Pro Tyr Lys Cys Ile
610 615 620
Glu Cys Gly Lys Val Phe Asn Ser Thr Thr Thr Leu Ala Arg His Arg
625 630 635 640
Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys
645 650 655
Val Phe Arg Tyr Arg Ser Gly Leu Ala Arg His Trp Ser Ile His Thr
660 665 670
Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Arg Val
675 680 685
Arg Ser Ile Leu Leu Asn His Gln Met Met His Thr Gly Glu Lys Pro
690 695 700
Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Ile Glu Arg Ser Asn Leu
705 710 715 720
Val Tyr His Gln Arg Asn His Thr Gly Glu Lys Pro Tyr Lys Cys Met

| | | | | | |
|---|-----|-----|-----|-----|-----|
| | 725 | | 730 | | 735 |
| Glu Cys Gly Lys Ala Phe Gly Arg Arg Ser Cys Leu Thr Lys His Gln | | | | | |
| | 740 | | 745 | | 750 |
| Arg Ile His Ser Ser Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys | | | | | |
| | 755 | | 760 | | 765 |
| Ser Tyr Ile Ser Arg Ser Gly Leu Thr Lys His Gln Ile Lys His Ala | | | | | |
| | 770 | | 775 | | 780 |
| Gly Glu Asn Leu Thr Thr Lys Leu Asn Val Glu Arg Pro Leu Asp Val | | | | | |
| 785 | | 790 | | 795 | 800 |
| Val Leu Thr Ser Gly Ile Pro Lys | | | | | |
| | 805 | | | | |

<210> 441

<211> 602

<212> PRT

<213> Homo sapiens

<400> 441

| |
|--|
| Met Ile Gln Ser Gly Lys Gly Ala Asp Pro Pro Asp Lys Lys Asp Met |
| 1 5 10 15 |
| Lys Leu Ser Thr Ala Thr Asn Pro Gln Asn Gly Leu Ser Gln Ile Leu |
| 20 25 30 |
| Arg Leu Val Leu Gln Glu Leu Ser Leu Phe Tyr Ser Arg Asp Val Asn |
| 35 40 45 |
| Gly Val Cys Leu Leu Tyr Asp Leu Leu His Ser Pro Trp Leu Gln Ala |
| 50 55 60 |
| Leu Leu Lys Ile Tyr Asp Cys Leu Gln Glu Phe Lys Glu Lys Lys Leu |
| 65 70 75 80 |

出証特 2 0 0 4 - 3 0 5 9 6 6 2

305 310 315 320
Asp Glu Glu Thr Phe Glu Ser Asp Lys Glu Glu Phe Val Gly Tyr Gly
 325 330 335
Gln Lys Phe Phe Ile Ala Gly Phe Arg Arg Ser Met Arg Leu Cys Arg
 340 345 350
Arg Lys Ser His Leu Ser Pro Leu His Ala Ser Val Cys Cys Thr Gly
 355 360 365
Ser Cys Tyr Ser Ala Val Gly Ala Pro Tyr Glu Glu Val Val Arg Tyr
 370 375 380
Gln Arg Arg Pro Ser Asp Lys Tyr Arg Leu Ile Val Leu Met Gly Pro
385 390 395 400
Ser Gly Val Gly Val Asn Glu Leu Arg Arg Gln Leu Ile Glu Phe Asn
 405 410 415
Pro Ser His Phe Gln Ser Ala Val Pro His Thr Thr Arg Thr Lys Lys
 420 425 430
Ser Tyr Glu Met Asn Gly Arg Glu Tyr His Tyr Val Ser Lys Glu Thr
 435 440 445
Phe Glu Asn Leu Ile Tyr Ser His Arg Met Leu Glu Tyr Gly Glu Tyr
 450 455 460
Lys Gly His Leu Tyr Gly Thr Ser Val Asp Ala Val Gln Thr Val Leu
465 470 475 480
Val Glu Gly Lys Ile Cys Val Met Asp Leu Glu Pro Gln Asp Ile Gln
 485 490 495
Gly Val Arg Thr His Glu Leu Lys Pro Tyr Val Ile Phe Ile Lys Pro
 500 505 510
Ser Asn Met Arg Cys Met Lys Gln Ser Arg Lys Asn Ala Lys Val Ile
 515 520 525
Thr Asp Tyr Tyr Val Asp Met Lys Phe Lys Asp Glu Asp Leu Gln Glu
 530 535 540

Met Glu Asn Leu Ala Gln Arg Met Glu Thr Gln Phe Gly Gln Phe Phe
 545 550 555 560
 Asp His Val Ile Val Asn Asp Ser Leu His Asp Ala Cys Ala Gln Leu
 565 570 575
 Leu Ser Ala Ile Gln Lys Ala Gln Glu Glu Pro Gln Trp Val Pro Ala
 580 585 590
 Thr Trp Ile Ser Ser Asp Thr Glu Ser Gln
 595 600

<210> 442

<211> 498

<212> PRT

<213> Homo sapiens

<400> 442

Met Glu Ser Pro Arg Gly Trp Thr Leu Gln Val Ala Pro Glu Glu Gly
 1 5 10 15
 Gln Val Leu Cys Asn Val Lys Thr Ala Thr Arg Gly Leu Ser Glu Gly
 20 25 30
 Ala Val Ser Gly Gly Trp Gly Ala Trp Glu Asn Ser Thr Glu Val Pro
 35 40 45
 Arg Glu Ala Gly Asp Gly Gln Arg Gln Gln Ala Thr Leu Gly Ala Ala
 50 55 60
 Asp Glu Gln Gly Gly Pro Gly Arg Glu Leu Gly Pro Ala Asp Gly Gly
 65 70 75 80
 Arg Asp Gly Ala Gly Pro Arg Ser Glu Pro Ala Asp Arg Ala Leu Arg
 85 90 95
 Pro Ser Pro Leu Pro Glu Glu Pro Gly Cys Arg Cys Gly Glu Cys Gly

| | | | |
|---|-----|-----|-----|
| 100 | 105 | 110 | |
| Lys Ala Phe Ser Gln Gly Ser Tyr Leu Leu Gln His Arg Arg Val His | | | |
| 115 | 120 | 125 | |
| Thr Gly Glu Lys Pro Tyr Thr Cys Pro Glu Cys Gly Lys Ala Phe Ala | | | |
| 130 | 135 | 140 | |
| Trp Ser Ser Asn Leu Ser Gln His Gln Arg Ile His Ser Gly Glu Lys | | | |
| 145 | 150 | 155 | 160 |
| Pro Tyr Ala Cys Arg Glu Cys Gly Lys Ala Phe Arg Ala Gln Ser Gln | | | |
| 165 | 170 | 175 | |
| Leu Ile His His Gln Glu Thr His Ser Gly Leu Lys Pro Phe Arg Cys | | | |
| 180 | 185 | 190 | |
| Pro Asp Cys Gly Lys Ser Phe Gly Arg Ser Thr Thr Leu Val Gln His | | | |
| 195 | 200 | 205 | |
| Arg Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Pro Glu Cys Gly | | | |
| 210 | 215 | 220 | |
| Lys Ala Phe Ser Trp Asn Ser Asn Phe Leu Glu His Arg Arg Val His | | | |
| 225 | 230 | 235 | 240 |
| Thr Gly Ala Arg Pro His Ala Cys Arg Asp Cys Gly Lys Ala Phe Ser | | | |
| 245 | 250 | 255 | |
| Gln Ser Ser Asn Leu Ala Glu His Leu Lys Ile His Ala Gly Ala Arg | | | |
| 260 | 265 | 270 | |
| Pro His Ala Cys Pro Asp Cys Gly Lys Ala Phe Val Arg Val Ala Gly | | | |
| 275 | 280 | 285 | |
| Leu Arg Gln His Arg Arg Thr His Ser Ser Glu Lys Pro Phe Pro Cys | | | |
| 290 | 295 | 300 | |
| Ala Glu Cys Gly Lys Ala Phe Arg Glu Ser Ser Gln Leu Leu Gln His | | | |
| 305 | 310 | 315 | 320 |
| Gln Arg Thr His Thr Gly Glu Arg Pro Phe Glu Cys Ala Glu Cys Gly | | | |
| 325 | 330 | 335 | |

Gln Ala Phe Val Met Gly Ser Tyr Leu Ala Glu His Arg Arg Val His
340 345 350
Thr Gly Glu Lys Pro His Ala Cys Ala Gln Cys Gly Lys Ala Phe Ser
355 360 365
Gln Arg Ser Asn Leu Leu Ser His Arg Arg Thr His Ser Gly Ala Lys
370 375 380
Pro Phe Ala Cys Ala Asp Cys Gly Lys Ala Phe Arg Gly Ser Ser Gly
385 390 395 400
Leu Ala His His Arg Leu Ser His Thr Gly Glu Arg Pro Phe Ala Cys
405 410 415
Ala Glu Cys Gly Lys Ala Phe Arg Gly Ser Ser Glu Leu Arg Gln His
420 425 430
Gln Arg Leu His Ser Gly Glu Arg Pro Phe Val Cys Ala His Cys Ser
435 440 445
Lys Ala Phe Val Arg Lys Ser Glu Leu Leu Ser His Arg Arg Thr His
450 455 460
Thr Gly Glu Arg Pro Tyr Ala Cys Gly Glu Cys Gly Lys Pro Phe Ser
465 470 475 480
His Arg Cys Asn Leu Asn Glu His Gln Lys Arg His Gly Gly Arg Ala
485 490 495
Ala Pro

<210> 443

<211> 486

<212> PRT

<213> Homo sapiens

<400> 443

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Gly | Arg | Gly | Ser | Gln | Gln | Gln | Gln | Pro | Thr | Arg | Arg | Gln | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Lys | Leu | Pro | Ser | Pro | Ser | Pro | Ala | Gly | Lys | Tyr | Glu | Ser | Ala | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Gly | Gly | Thr | Gln | Pro | Glu | Pro | Gly | Leu | Gly | Ala | Arg | Met | Ala | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| His | Lys | Ala | Leu | Val | Met | Cys | Leu | Gly | Leu | Pro | Leu | Phe | Leu | Phe | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Ala | Trp | Ala | Gln | Gly | His | Val | Pro | Pro | Gly | Cys | Ser | Gln | Gly | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Asn | Pro | Leu | Tyr | Tyr | Asn | Leu | Cys | Asp | Arg | Ser | Gly | Ala | Trp | Gly | Ile |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Leu | Glu | Ala | Val | Ala | Gly | Ala | Gly | Ile | Val | Thr | Thr | Phe | Val | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Thr | Ile | Ile | Leu | Val | Ala | Ser | Leu | Pro | Phe | Val | Gln | Asp | Thr | Lys | Lys |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Arg | Ser | Leu | Leu | Gly | Thr | Gln | Val | Phe | Phe | Leu | Leu | Gly | Thr | Leu | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Phe | Cys | Leu | Val | Phe | Ala | Cys | Val | Val | Lys | Pro | Asp | Phe | Ser | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Cys | Ala | Ser | Arg | Arg | Phe | Leu | Phe | Gly | Val | Leu | Phe | Ala | Ile | Cys | Phe |
| | | | | 165 | | | | | 170 | | | | 175 | | |
| Ser | Cys | Leu | Ala | Ala | His | Val | Phe | Ala | Leu | Asn | Phe | Leu | Ala | Arg | Lys |
| | | 180 | | | | | | 185 | | | | 190 | | | |
| Asn | His | Gly | Pro | Arg | Gly | Trp | Val | Ile | Phe | Thr | Val | Ala | Leu | Leu | Leu |
| | 195 | | | | | 200 | | | | | | 205 | | | |
| Thr | Leu | Val | Glu | Val | Ile | Ile | Asn | Thr | Glu | Trp | Leu | Ile | Ile | Thr | Leu |
| | 210 | | | | | 215 | | | | | 220 | | | | |

Val Arg Gly Ser Gly Glu Gly Gly Pro Gln Gly Asn Ser Ser Ala Gly
225 230 235 240
Trp Ala Val Ala Ser Pro Cys Ala Ile Ala Asn Met Asp Phe Val Met
245 250 255
Ala Leu Ile Tyr Val Met Leu Leu Leu Leu Gly Ala Phe Leu Gly Ala
260 265 270
Trp Pro Ala Leu Cys Gly Arg Tyr Lys Arg Trp Arg Lys His Gly Val
275 280 285
Phe Val Leu Leu Thr Thr Ala Thr Ser Val Ala Ile Trp Val Val Trp
290 295 300
Ile Val Met Tyr Thr Tyr Gly Asn Lys Gln His Asn Ser Pro Thr Trp
305 310 315 320
Asp Asp Pro Thr Leu Ala Ile Ala Leu Ala Ala Asn Ala Trp Ala Phe
325 330 335
Val Leu Phe Tyr Val Ile Pro Glu Val Ser Gln Val Thr Lys Ser Ser
340 345 350
Pro Glu Gln Ser Tyr Gln Gly Asp Met Tyr Pro Thr Arg Gly Val Gly
355 360 365
Tyr Glu Thr Ile Leu Lys Glu Gln Lys Gly Gln Ser Met Phe Val Glu
370 375 380
Asn Lys Ala Phe Ser Met Asp Glu Pro Val Ala Ala Lys Arg Pro Val
385 390 395 400
Ser Pro Tyr Ser Gly Tyr Asn Gly Gln Leu Leu Thr Ser Val Tyr Gln
405 410 415
Pro Thr Glu Met Ala Leu Met His Lys Val Pro Ser Glu Gly Ala Tyr
420 425 430
Asp Ile Ile Leu Pro Arg Ala Thr Ala Asn Ser Gln Val Met Gly Ser
435 440 445
Ala Asn Ser Thr Leu Arg Ala Glu Asp Met Tyr Ser Ala Gln Ser His

450 455 460
Gln Ala Ala Thr Pro Pro Lys Asp Gly Lys Asn Ser Gln Val Phe Arg
465 470 475 480
Asn Pro Tyr Val Trp Asp
485

<210> 444

<211> 301

<212> PRT

<213> Homo sapiens

<400> 444

Met Tyr Thr Arg Arg Tyr Ser Ser Ile Ser Ser Thr Ile Met Asp Val
1 5 10 15
Asp Ser Thr Ile Ser Ser Gly Arg Ser Thr Pro Ala Met Met Asn Gly
20 25 30
Gln Gly Ser Thr Thr Ser Ser Ser Lys Asn Ile Ala Tyr Asn Cys Cys
35 40 45
Trp Asp Gln Cys Gln Ala Cys Phe Asn Ser Ser Pro Asp Leu Ala Asp
50 55 60
His Ile Arg Ser Ile His Val Asp Gly Gln Arg Gly Gly Val Phe Val
65 70 75 80
Cys Leu Trp Lys Gly Cys Lys Val Tyr Asn Thr Pro Ser Thr Ser Gln
85 90 95
Ser Trp Leu Gln Arg His Met Leu Thr His Ser Gly Asp Lys Pro Phe
100 105 110
Lys Cys Val Val Gly Gly Cys Asn Ala Ser Phe Ala Ser Gln Gly Gly
115 120 125

Leu Ala Arg His Val Pro Thr His Phe Ser Gln Gln Asn Ser Ser Lys
130 135 140
Val Ser Ser Gln Pro Lys Ala Lys Glu Glu Ser Pro Ser Lys Ala Gly
145 150 155 160
Met Asn Lys Arg Arg Lys Leu Lys Asn Lys Arg Arg Arg Ser Leu Pro
165 170 175
Arg Pro His Asp Phe Phe Asp Ala Gln Thr Leu Asp Ala Ile Arg His
180 185 190
Arg Ala Ile Cys Phe Asn Leu Ser Ala His Ile Glu Ser Leu Gly Lys
195 200 205
Gly His Ser Val Val Phe His Ser Thr Val Ile Ala Lys Arg Lys Glu
210 215 220
Asp Ser Gly Lys Ile Lys Leu Leu Leu His Trp Met Pro Glu Asp Ile
225 230 235 240
Leu Pro Asp Val Trp Val Asn Glu Ser Glu Arg His Gln Leu Lys Thr
245 250 255
Lys Val Val His Leu Ser Lys Leu Pro Lys Asp Thr Ala Leu Leu Leu
260 265 270
Asp Pro Asn Ile Tyr Arg Thr Met Pro Gln Lys Arg Leu Lys Arg Thr
275 280 285
Leu Ile Arg Lys Val Phe Asn Leu Tyr Leu Ser Lys Gln
290 295 300

<210> 445

<211> 626

<212> PRT

<213> Homo sapiens

<400> 445

Met Ala Val Ser Gly Phe Thr Leu Gly Thr Cys Ile Leu Leu Leu His

1 5 10 15

Ile Ser Tyr Val Ala Asn Tyr Pro Asn Gly Lys Val Thr Gln Ser Cys

20 25 30

His Gly Met Ile Pro Glu His Gly His Ser Pro Gln Ser Val Pro Val

35 40 45

His Asp Ile Tyr Val Ser Gln Met Thr Phe Arg Pro Gly Asp Gln Ile

50 55 60

Glu Val Thr Leu Ser Gly His Pro Phe Lys Gly Phe Leu Leu Glu Ala

65 70 75 80

Arg Asn Ala Glu Asp Leu Asn Gly Pro Pro Ile Gly Ser Phe Thr Leu

85 90 95

Ile Asp Ser Glu Val Ser Gln Leu Leu Thr Cys Glu Asp Ile Gln Gly

100 105 110

Ser Ala Val Ser His Arg Ser Ala Ser Lys Lys Thr Glu Ile Lys Val

115 120 125

Tyr Trp Asn Ala Pro Ser Ser Ala Pro Asn His Thr Gln Phe Leu Val

130 135 140

Thr Val Val Glu Lys Tyr Lys Ile Tyr Trp Val Lys Ile Pro Gly Pro

145 150 155 160

Ile Ile Ser Gln Pro Asn Ala Phe Pro Phe Thr Thr Pro Lys Ala Thr

165 170 175

Val Val Leu Leu Pro Thr Leu Pro Pro Val Ser His Leu Thr Lys Pro

180 185 190

Phe Ser Ala Ser Asp Cys Gly Asn Lys Lys Phe Cys Ile Arg Ser Pro

195 200 205

Leu Asn Cys Asp Pro Glu Lys Glu Ala Ser Cys Val Phe Leu Ser Phe

210 215 220

Thr Arg Asp Asp Gln Ser Val Met Val Glu Met Ser Gly Pro Ser Lys
225 230 235 240
Gly Tyr Leu Ser Phe Ala Leu Ser His Asp Gln Trp Met Gly Asp Asp
245 250 255
Asp Ala Tyr Leu Cys Ile His Glu Asp Gln Thr Val Tyr Ile Gln Pro
260 265 270
Ser His Leu Thr Gly Arg Ser His Pro Val Met Asp Ser Arg Asp Thr
275 280 285
Leu Glu Asp Met Ala Trp Arg Leu Ala Asp Gly Val Met Gln Cys Ser
290 295 300
Phe Arg Arg Asn Ile Thr Leu Pro Gly Val Lys Asn Arg Phe Asp Leu
305 310 315 320
Asn Thr Ser Tyr Tyr Ile Phe Leu Ala Asp Gly Ala Ala Asn Asp Gly
325 330 335
Arg Ile Tyr Lys His Ser Gln Gln Pro Leu Ile Thr Tyr Glu Lys Tyr
340 345 350
Asp Val Thr Asp Ser Pro Lys Asn Ile Gly Gly Ser His Ser Val Leu
355 360 365
Leu Leu Lys Val His Gly Ala Leu Met Phe Val Ala Trp Met Thr Thr
370 375 380
Val Ser Ile Gly Val Leu Val Ala Arg Phe Phe Lys Pro Val Trp Ser
385 390 395 400
Lys Ala Phe Leu Leu Gly Glu Ala Ala Trp Phe Gln Val His Arg Met
405 410 415
Leu Met Phe Thr Thr Thr Val Leu Thr Cys Ile Ala Phe Val Met Pro
420 425 430
Phe Ile Tyr Arg Gly Gly Trp Ser Arg His Ala Gly Tyr His Pro Tyr
435 440 445
Leu Gly Cys Ile Val Met Thr Leu Ala Val Leu Gln Pro Leu Leu Ala

450 455 460
Val Phe Arg Pro Pro Leu His Asp Pro Arg Arg Gln Met Phe Asn Trp
465 470 475 480
Thr His Trp Ser Met Gly Thr Ala Ala Arg Ile Ile Ala Val Ala Ala
485 490 495
Met Phe Leu Gly Met Asp Leu Pro Gly Leu Asn Leu Pro Asp Ser Trp
500 505 510
Lys Thr Tyr Ala Met Thr Gly Phe Val Ala Trp His Val Gly Thr Glu
515 520 525
Val Val Leu Glu Leu Lys Tyr Trp Met Met Thr Glu Phe Arg Ser Phe
530 535 540
Ser His Leu Leu Gln Trp Lys Gln Arg Val Met Leu Leu Lys Arg Gln
545 550 555 560
Cys Trp Gln Phe Met Ser Val Gly Met Leu Leu Phe Ser Ser Tyr Phe
565 570 575
Tyr Leu Gln Ser Thr Ile Tyr Glu Gln Ala Lys Thr Leu Ala Phe Ala
580 585 590
Gly Gln Val Ile Ile Ile Ile Lys Pro Lys Lys Leu Glu Ala Cys Pro
595 600 605
Asp Cys Leu Glu His Ile Cys Glu Phe Ser Leu Gly Arg Leu Gly Ser
610 615 620
Cys Leu
625

<210> 446

<211> 827

<212> PRT

<213> Homo sapiens

<400> 446

Met Ile Arg Arg Leu Lys Thr Glu Val Leu Thr Gln Leu Pro Pro Lys
 1 5 10 15
 Val Arg Gln Arg Ile Pro Phe Asp Leu Pro Ser Ala Ala Ala Lys Glu
 20 25 30
 Leu Asn Thr Ser Phe Glu Glu Trp Glu Lys Ile Met Arg Thr Pro Asn
 35 40 45
 Ser Gly Ala Met Glu Thr Val Met Gly Leu Ile Thr Arg Met Phe Lys
 50 55 60
 Gln Thr Ala Ile Ala Lys Ala Gly Ala Val Lys Asp Tyr Ile Lys Met
 65 70 75 80
 Met Leu Gln Asn Asp Ser Leu Lys Phe Leu Val Phe Ala His His Leu
 85 90 95
 Ser Met Leu Gln Ala Cys Thr Glu Ala Val Ile Glu Asn Lys Thr Arg
 100 105 110
 Tyr Ile Arg Ile Asp Gly Ser Val Ser Ser Ser Glu Arg Ile His Leu
 115 120 125
 Val Asn Gln Phe Gln Lys Asp Pro Asp Thr Arg Val Ala Ile Leu Ser
 130 135 140
 Ile Gln Ala Ala Gly Gln Gly Leu Thr Phe Thr Ala Ala Ser His Val
 145 150 155 160
 Val Phe Ala Glu Leu Tyr Trp Asp Pro Gly His Ile Lys Gln Ala Glu
 165 170 175
 Asp Arg Ala His Arg Ile Gly Gln Cys Ser Ser Val Asn Ile His Tyr
 180 185 190
 Leu Ile Ala Asn Gly Thr Leu Asp Thr Leu Met Trp Gly Met Leu Asn
 195 200 205
 Arg Lys Ala Gln Val Thr Gly Ser Thr Leu Asn Gly Arg Lys Glu Lys

210 215 220
Ile Gln Ala Glu Glu Gly Asp Lys Glu Lys Trp Asp Phe Leu Gln Phe
225 230 235 240
Ala Glu Ala Trp Thr Pro Asn Asp Ser Ser Glu Glu Leu Arg Lys Glu
245 250 255
Ala Leu Phe Thr His Phe Glu Lys Glu Lys Gln His Asp Ile Arg Ser
260 265 270
Phe Phe Val Pro Gln Pro Lys Lys Arg Gln Leu Met Thr Ser Cys Asp
275 280 285
Glu Ser Lys Arg Phe Arg Glu Glu Asn Thr Val Val Ser Ser Asp Pro
290 295 300
Thr Lys Thr Ala Ala Arg Asp Ile Ile Asp Tyr Glu Ser Asp Val Glu
305 310 315 320
Pro Glu Thr Lys Arg Leu Lys Leu Ala Ala Ser Glu Asp His Cys Ser
325 330 335
Pro Ser Glu Glu Thr Pro Ser Gln Ser Lys Gln Ile Arg Thr Pro Leu
340 345 350
Val Glu Ser Val Gln Glu Ala Lys Ala Gln Leu Thr Thr Pro Ala Phe
355 360 365
Pro Val Glu Gly Trp Gln Cys Ser Leu Cys Thr Tyr Ile Asn Asn Ser
370 375 380
Glu Leu Pro Tyr Cys Glu Met Cys Glu Thr Pro Gln Gly Ser Ala Val
385 390 395 400
Met Gln Ile Asp Ser Leu Asn His Ile Gln Asp Lys Asn Glu Lys Asp
405 410 415
Asp Ser Gln Lys Asp Thr Ser Lys Lys Val Gln Thr Ile Ser Asp Cys
420 425 430
Glu Lys Gln Ala Leu Ala Gln Ser Glu Pro Gly Gln Leu Ala Asp Ser
435 440 445

Lys Glu Glu Thr Pro Lys Ile Glu Lys Glu Asp Gly Leu Thr Ser Gln
 450 455 460
 Pro Gly Asn Glu Gln Trp Lys Ser Ser Asp Thr Leu Pro Val Tyr Asp
 465 470 475 480
 Thr Leu Met Phe Cys Ala Ser Arg Asn Thr Asp Arg Ile His Ile Tyr
 485 490 495
 Thr Lys Asp Gly Lys Gln Met Ser Cys Asn Phe Ile Pro Leu Asp Ile
 500 505 510
 Lys Leu Asp Leu Trp Glu Asp Leu Pro Ala Ser Phe Gln Leu Lys Gln
 515 520 525
 Tyr Arg Ser Leu Ile Leu Arg Phe Val Arg Glu Trp Ser Ser Leu Thr
 530 535 540
 Ala Met Lys Gln Arg Ile Ile Arg Lys Ser Gly Gln Leu Phe Cys Ser
 545 550 555 560
 Pro Ile Leu Ala Leu Glu Glu Ile Thr Lys Gln Gln Thr Lys Gln Asn
 565 570 575
 Cys Thr Lys Arg Tyr Ile Thr Lys Glu Asp Val Ala Val Ala Ser Met
 580 585 590
 Asp Lys Ala Lys Asn Val Gly Gly His Val Arg Leu Ile Thr Lys Glu
 595 600 605
 Ser Arg Pro Arg Asp Pro Phe Thr Lys Lys Leu Leu Glu Asp Gly Ala
 610 615 620
 Cys Val Pro Phe Leu Asn Pro Tyr Thr Val Gln Ala Asp Leu Thr Val
 625 630 635 640
 Lys Pro Ser Thr Ser Lys Gly Tyr Leu Gln Ala Val Asp Asn Glu Gly
 645 650 655
 Asn Pro Leu Cys Leu Arg Cys Gln Gln Pro Thr Cys Gln Thr Lys Gln
 660 665 670
 Ala Cys Lys Ala Asn Ser Trp Asp Ser Arg Phe Cys Ser Leu Lys Cys

出証特 2 0 0 4 - 3 0 5 9 6 6 2

| | | | |
|---|-----|-----|-----|
| Asp Met Lys Ser Glu Ile Pro Ser Asp Ala Pro Lys Thr Gln Glu Ser | | | |
| 20 | 25 | 30 | |
| Leu Lys Gly Ile Leu Leu His Pro Glu Pro Ile Gly Ala Ala Lys Ser | | | |
| 35 | 40 | 45 | |
| Phe Pro Ala Gly Val Glu Met Ile Asn Ser Lys Val Gly Asn Glu Phe | | | |
| 50 | 55 | 60 | |
| Ser His Leu Cys Asp Asp Ser Gln Lys Gln Glu Lys Glu Met Asn Gly | | | |
| 65 | 70 | 75 | 80 |
| Asn Gln Gln Glu Gln Glu Lys Ser Leu Val Val Arg Lys Lys Arg Lys | | | |
| 85 | 90 | 95 | |
| Ser Gln Gln Ala Gly Pro Ser Tyr Val Gln Asn Cys Val Lys Glu Asn | | | |
| 100 | 105 | 110 | |
| Gln Gly Ile Leu Gly Leu Arg Gln His Leu Gly Thr Pro Ser Asp Glu | | | |
| 115 | 120 | 125 | |
| Asp Asn Asp Ser Ser Phe Ser Asp Cys Leu Ser Ser Pro Ser Ser Ser | | | |
| 130 | 135 | 140 | |
| Leu His Phe Gly Asp Ser Asp Thr Val Thr Ser Asp Glu Asp Lys Glu | | | |
| 145 | 150 | 155 | 160 |
| Val Ser Val Arg His Ser Gln Thr Ile Leu Asn Ala Lys Ser Arg Ser | | | |
| 165 | 170 | 175 | |
| His Ser Ala Arg Ser His Lys Trp Pro Arg Thr Glu Thr Glu Ser Val | | | |
| 180 | 185 | 190 | |
| Ser Gly Leu Leu Met Lys Arg Pro Cys Leu His Gly Ser Ser Leu Arg | | | |
| 195 | 200 | 205 | |
| Arg Leu Pro Cys Arg Lys Arg Phe Val Lys Asn Asn Ser Ser Gln Arg | | | |
| 210 | 215 | 220 | |
| Thr Gln Lys Gln Lys Glu Arg Ile Leu Met Gln Arg Lys Lys Arg Glu | | | |
| 225 | 230 | 235 | 240 |
| Val Leu Ala Arg Arg Lys Tyr Ala Leu Leu Pro Ser Ser Ser Ser Ser | | | |

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| | 245 | | 250 | | 255 |
| Ser | Glu | Asn | Asp | Leu | Ser |
| Ser | Ser | Glu | Ser | Ser | Ser |
| Ser | Ser | Ser | Ser | Ser | Ser |
| Ser | Thr | Glu | | | |
| | 260 | | 265 | | 270 |
| Gly | Glu | Glu | Asp | Leu | Phe |
| Val | Ser | Ala | Ser | Glu | Asn |
| His | Gln | Asn | Asn | | |
| | 275 | | 280 | | 285 |
| Pro | Ala | Val | Pro | Ser | Gly |
| Ser | Ile | Asp | Glu | Asp | Val |
| Val | Val | Val | Ile | Glu | |
| | 290 | | 295 | | 300 |
| Ala | Ser | Ser | Thr | Pro | Gln |
| Val | Thr | Ala | Asn | Glu | Glu |
| Ile | Asn | Val | Thr | | |
| | 305 | | 310 | | 315 |
| Ser | Thr | Asp | Ser | Glu | Val |
| Glu | Ile | Val | Thr | Val | Gly |
| Glu | Ser | Tyr | Arg | | |
| | 325 | | 330 | | 335 |
| Ser | Arg | Ser | Thr | Leu | Gly |
| His | Ser | Arg | Ser | His | Trp |
| Ser | Gln | Gly | Ser | | |
| | 340 | | 345 | | 350 |
| Ser | Ser | His | Ala | Ser | Arg |
| Pro | Gln | Glu | Pro | Arg | Asn |
| Arg | Ser | Arg | Ile | | |
| | 355 | | 360 | | 365 |
| Ser | Thr | Val | Ile | Gln | Pro |
| Leu | Arg | Gln | Asn | Ala | Ala |
| Glu | Val | Val | Asp | | |
| | 370 | | 375 | | 380 |
| Leu | Thr | Val | Asp | Glu | Asp |
| Glu | Pro | Thr | Val | Val | Pro |
| Thr | Thr | Ser | Ala | | |
| | 385 | | 390 | | 395 |
| Arg | Met | Glu | Ser | Gln | Ala |
| Thr | Ser | Ala | Ser | Ile | Asn |
| Asn | Ser | Asn | Pro | | |
| | 405 | | 410 | | 415 |
| Ser | Thr | Ser | Glu | Gln | Ala |
| Ser | Asp | Thr | Ala | Ser | Ala |
| Val | Thr | Ser | Ser | | |
| | 420 | | 425 | | 430 |
| Gln | Pro | Ser | Thr | Val | Ser |
| Glu | Thr | Ser | Ala | Thr | Leu |
| Thr | Ser | Asn | Ser | | |
| | 435 | | 440 | | 445 |
| Thr | Thr | Gly | Thr | Ser | Ile |
| Gly | Asp | Asp | Ser | Arg | Arg |
| Thr | Thr | Ser | Ser | | |
| | 450 | | 455 | | 460 |
| Ala | Val | Thr | Glu | Thr | Gly |
| Pro | Pro | Ala | Met | Pro | Arg |
| Leu | Pro | Ser | Cys | | |
| | 465 | | 470 | | 475 |
| | | | | | 480 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Pro | Gln | His | Ser | Pro | Cys | Gly | Gly | Ser | Ser | Gln | Asn | His | His | Ala |
| | | | | | 485 | | | | 490 | | | | | 495 | |
| Leu | Gly | His | Pro | His | Thr | Ser | Cys | Phe | Gln | Gln | His | Gly | His | His | Phe |
| | | | | | 500 | | | | 505 | | | | | 510 | |
| Gln | His | His | His | His | His | His | His | Thr | Pro | His | Pro | Ala | Val | Pro | Val |
| | | | | | 515 | | | | 520 | | | | | 525 | |
| Ser | Pro | Ser | Phe | Ser | Asp | Pro | Ala | Cys | Pro | Val | Glu | Arg | Pro | Pro | Gln |
| | | | | | 530 | | | | 535 | | | | | 540 | |
| Val | Gln | Ala | Pro | Cys | Gly | Ala | Asn | Ser | Ser | Ser | Gly | Thr | Ser | Tyr | His |
| | | | | | 545 | | | | 550 | | | | | 555 | |
| Glu | Gln | Gln | Ala | Leu | Pro | Val | Asp | Leu | Ser | Asn | Ser | Gly | Ile | Arg | Ser |
| | | | | | 565 | | | | 570 | | | | | 575 | |
| His | Gly | Ser | Gly | Ser | Phe | His | Gly | Ala | Ser | Ala | Phe | Asp | Pro | Cys | Cys |
| | | | | | 580 | | | | 585 | | | | | 590 | |
| Pro | Val | Ser | Ser | Ser | Arg | Ala | Ala | Ile | Phe | Gly | His | Gln | Ala | Ala | Ala |
| | | | | | 595 | | | | 600 | | | | | 605 | |
| Ala | Ala | Pro | Ser | Gln | Pro | Leu | Ser | Ser | Ile | Asp | Gly | Tyr | Gly | Ser | Ser |
| | | | | | 610 | | | | 615 | | | | | 620 | |
| Met | Val | Ala | Gln | Pro | Gln | Pro | Gln | Pro | Pro | Pro | Gln | Pro | Ser | Leu | Ser |
| | | | | | 625 | | | | 630 | | | | | 635 | |
| Ser | Cys | Arg | His | Tyr | Met | Pro | Pro | Pro | Tyr | Ala | Ser | Leu | Thr | Arg | Pro |
| | | | | | 645 | | | | 650 | | | | | 655 | |
| Leu | His | His | Gln | Ala | Ser | Ala | Cys | Pro | His | Ser | His | Gly | Asn | Pro | Pro |
| | | | | | 660 | | | | 665 | | | | | 670 | |
| Pro | Gln | Thr | Gln | Pro | Pro | Pro | Gln | Val | Asp | Tyr | Val | Ile | Pro | His | Pro |
| | | | | | 675 | | | | 680 | | | | | 685 | |
| Val | His | Ala | Phe | His | Ser | Gln | Ile | Ser | Ser | His | Ala | Thr | Ser | His | Pro |
| | | | | | 690 | | | | 695 | | | | | 700 | |
| Val | Ala | Pro | Pro | Pro | Pro | Thr | His | Leu | Ala | Ser | Thr | Ala | Ala | Pro | Ile |

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Cys Leu Ser Ile Leu Glu Glu Gly Glu Asp Val Arg Arg Leu Pro Cys
 945 950 955 960
 Met His Leu Phe His Gln Val Cys Val Asp Gln Trp Leu Val Thr Asn
 965 970 975
 Lys Lys Cys Pro Ile Cys Arg Val Asp Ile Glu Ala Gln Leu Pro Ser
 980 985 990
 Glu Ser

<210> 448

<211> 105

<212> PRT

<213> Homo sapiens

<400> 448

Met Glu Gln Ser Trp Thr Glu Asn Asp Phe Asp Glu Leu Arg Glu Glu
 1 5 10 15
 Gly Phe Arg Arg Ser Asn Tyr Glu Leu Gln Glu Glu Ile Gln Ile Lys
 20 25 30
 Gly Lys Glu Val Lys Asn Phe Glu Lys Asn Leu Asp Glu Cys Ile Thr
 35 40 45
 Arg Ile Thr Asn Thr Glu Lys Cys Leu Glu Asp Leu Met Glu Leu Lys
 50 55 60
 Ala Lys Ala Arg Glu Leu Cys Glu Glu Cys Arg Ser Leu Arg Ser Arg
 65 70 75 80
 Cys Asp Gln Leu Glu Glu Arg Val Ser Val Met Glu Asp Glu Met Asn
 85 90 95
 Glu Met Lys Gln Glu Gly Lys Phe Arg

100

105

<210> 449

<211> 136

<212> PRT

<213> Homo sapiens

<400> 449

Met Trp Leu Glu Val Arg Ala Leu Leu Leu Ser Cys Val Arg Val Phe

1

5

10

15

Gln His Gly Thr Asp Gly Ser Ser Gly His Ser Leu Ser Gln Gly Leu

20

25

30

Ala Arg Leu Arg His Asp Gly Pro Ser Pro Ala Leu Thr Thr Thr Lys

35

40

45

Ser Gly Arg Val Glu Phe Ala Val Asn Ser Ala Val Pro Met Glu Thr

50

55

60

Cys Val Val Ser Glu Gln Gln Tyr Leu Leu Glu Leu Val Gln Thr Pro

65

70

75

80

Arg Leu Pro Ser Gly Thr Thr Trp Ser Thr Ser Pro Arg Glu Ala Ala

85

90

95

Ala Leu Arg Gly Cys Pro Ala Gln Trp Pro Leu Ser Arg Val Ser Leu

100

105

110

Gln Glu Ala Ser Glu Gln Ser Leu Lys Pro Gly Met Ala Pro Ser Pro

115

120

125

Cys Cys His His Cys Val Leu Thr

130

135

<210> 450

<211> 250

<212> PRT

<213> Homo sapiens

<400> 450

Met Ala Glu Gly Gly Ala Ser Lys Gly Gly Gly Glu Glu Pro Gly Lys

1 5 10 15

Leu Pro Glu Pro Ala Glu Glu Glu Ser Gln Val Leu Arg Gly Thr Gly

20 25 30

His Cys Lys Trp Phe Asn Val Arg Met Gly Phe Gly Phe Ile Ser Met

35 40 45

Ile Asn Arg Glu Gly Ser Pro Leu Asp Ile Pro Val Asp Val Phe Val

50 55 60

His Gln Ser Lys Leu Phe Met Glu Gly Phe Arg Ser Leu Lys Glu Gly

65 70 75 80

Glu Pro Val Glu Phe Thr Phe Lys Lys Ser Ser Lys Gly Leu Glu Ser

85 90 95

Ile Arg Val Thr Gly Pro Gly Gly Ser Pro Cys Leu Gly Ser Glu Arg

100 105 110

Arg Pro Lys Gly Lys Thr Leu Gln Lys Arg Lys Pro Lys Gly Asp Arg

115 120 125

Cys Tyr Asn Cys Gly Gly Leu Asp His His Ala Lys Glu Cys Ser Leu

130 135 140

Pro Pro Gln Pro Lys Lys Cys His Tyr Cys Gln Ser Ile Met His Met

145 150 155 160

Val Ala Asn Cys Pro His Lys Asn Val Ala Gln Pro Pro Ala Ser Ser

165 170 175

Gln Gly Arg Gln Glu Ala Glu Ser Gln Pro Cys Thr Ser Thr Leu Pro

180 185 190
 Arg Glu Val Gly Gly Gly His Gly Cys Thr Ser Pro Pro Phe Pro Gln
 195 200 205
 Glu Ala Arg Ala Glu Ile Ser Glu Arg Ser Gly Arg Ser Pro Gln Glu
 210 215 220
 Ala Ser Ser Thr Lys Ser Ser Ile Ala Pro Glu Glu Gln Ser Lys Lys
 225 230 235 240
 Gly Pro Ser Val Gln Lys Arg Lys Lys Thr
 245 250

<210> 451

<211> 748

<212> PRT

<213> Homo sapiens

<400> 451

Met Lys Gln Met His Glu Trp Asn Phe Thr Ala Ser Ser Ile Lys Gly
 1 5 10 15
 Ile Ser Leu Ser Lys Phe Asp Glu Arg Cys Cys Phe Leu Tyr Val His
 20 25 30
 Asp Asn Ser Asp Asp Phe Gln Ile Tyr Phe Ser Thr Glu Glu Gln Cys
 35 40 45
 Ser Arg Phe Phe Ser Leu Val Lys Glu Met Ile Thr Asn Thr Ala Gly
 50 55 60
 Ser Thr Val Glu Leu Glu Gly Glu Thr Asp Gly Asp Thr Leu Glu Tyr
 65 70 75 80
 Glu Tyr Asp His Asp Ala Asn Gly Glu Arg Val Val Leu Gly Lys Gly
 85 90 95

Thr Tyr Gly Ile Val Tyr Ala Gly Arg Asp Leu Ser Asn Gln Val Arg
100 105 110
Ile Ala Ile Lys Glu Ile Pro Glu Arg Asp Ser Arg Tyr Ser Gln Pro
115 120 125
Leu His Glu Glu Ile Ala Leu His Lys Tyr Leu Lys His Arg Asn Ile
130 135 140
Val Gln Tyr Leu Gly Ser Val Ser Glu Asn Gly Tyr Ile Lys Ile Phe
145 150 155 160
Met Glu Gln Val Pro Gly Gly Ser Leu Ser Ala Leu Leu Arg Ser Lys
165 170 175
Trp Gly Pro Met Lys Glu Pro Thr Ile Lys Phe Tyr Thr Lys Gln Ile
180 185 190
Leu Glu Gly Leu Lys Tyr Leu His Glu Asn Gln Ile Val His Arg Asp
195 200 205
Ile Lys Gly Asp Asn Val Leu Val Asn Thr Tyr Ser Gly Val Val Lys
210 215 220
Ile Ser Asp Phe Gly Thr Ser Lys Arg Leu Ala Gly Val Asn Pro Cys
225 230 235 240
Thr Glu Thr Phe Thr Gly Thr Leu Gln Tyr Met Ala Pro Glu Ile Ile
245 250 255
Asp Gln Gly Pro Arg Gly Tyr Gly Ala Pro Ala Asp Ile Trp Ser Leu
260 265 270
Gly Cys Thr Ile Ile Glu Met Ala Thr Ser Lys Pro Pro Phe His Glu
275 280 285
Leu Gly Glu Pro Gln Ala Ala Met Phe Lys Val Gly Met Phe Lys Ile
290 295 300
His Pro Glu Ile Pro Glu Ala Leu Ser Ala Glu Ala Arg Ala Phe Ile
305 310 315 320
Leu Ser Cys Phe Glu Pro Asp Pro His Lys Arg Ala Thr Thr Ala Glu

| | | |
|---|-----|-----|
| 325 | 330 | 335 |
| Leu Leu Arg Glu Gly Phe Leu Arg Gln Val Asn Lys Gly Lys Lys Asn | | |
| 340 | 345 | 350 |
| Arg Ile Ala Phe Lys Pro Ser Glu Gly Pro Arg Gly Val Val Leu Ala | | |
| 355 | 360 | 365 |
| Leu Pro Thr Gln Gly Glu Pro Met Ala Thr Ser Ser Ser Glu His Gly | | |
| 370 | 375 | 380 |
| Ser Val Ser Pro Asp Ser Asp Ala Gln Pro Asp Ala Leu Phe Glu Arg | | |
| 385 | 390 | 395 |
| 400 | | |
| Thr Arg Ala Pro Arg His His Leu Gly His Leu Leu Ser Val Pro Asp | | |
| 405 | 410 | 415 |
| Glu Ser Ser Ala Leu Glu Asp Arg Gly Leu Ala Ser Ser Pro Glu Asp | | |
| 420 | 425 | 430 |
| Arg Asp Gln Gly Leu Phe Leu Leu Arg Lys Asp Ser Glu Arg Arg Ala | | |
| 435 | 440 | 445 |
| Ile Leu Tyr Lys Ile Leu Trp Glu Glu Gln Asn Gln Val Ala Ser Asn | | |
| 450 | 455 | 460 |
| Leu Gln Glu Cys Val Ala Gln Ser Ser Glu Glu Leu His Leu Ser Val | | |
| 465 | 470 | 475 |
| 480 | | |
| Gly His Ile Lys Gln Ile Ile Gly Ile Leu Arg Asp Phe Ile Arg Ser | | |
| 485 | 490 | 495 |
| Pro Glu His Arg Val Met Ala Thr Thr Ile Ser Lys Leu Lys Val Asp | | |
| 500 | 505 | 510 |
| Leu Asp Phe Asp Ser Ser Ser Ile Ser Gln Ile His Leu Val Leu Phe | | |
| 515 | 520 | 525 |
| Gly Phe Gln Asp Ala Val Asn Lys Ile Leu Arg Asn His Leu Ile Arg | | |
| 530 | 535 | 540 |
| Pro His Trp Met Phe Ala Met Asp Asn Ile Ile Arg Arg Ala Val Gln | | |
| 545 | 550 | 555 |
| 560 | | |

Ala Ala Val Thr Ile Leu Ile Pro Glu Leu Arg Ala His Phe Glu Pro
565 570 575
Thr Cys Glu Thr Glu Gly Val Asp Lys Asp Met Asp Glu Ala Glu Glu
580 585 590
Gly Tyr Pro Pro Ala Thr Gly Pro Gly Gln Glu Ala Gln Pro His Gln
595 600 605
Gln His Leu Ser Leu Gln Leu Gly Glu Leu Arg Gln Glu Thr Asn Arg
610 615 620
Leu Leu Glu His Leu Val Glu Lys Glu Arg Glu Tyr Gln Asn Leu Leu
625 630 635 640
Arg Gln Thr Leu Glu Gln Lys Thr Gln Glu Leu Tyr His Leu Gln Leu
645 650 655
Lys Leu Lys Ser Asn Cys Ile Thr Glu Asn Pro Ala Gly Pro Tyr Gly
660 665 670
Gln Arg Thr Asp Lys Glu Leu Ile Asp Trp Leu Arg Leu Gln Gly Ala
675 680 685
Asp Ala Lys Thr Ile Glu Lys Ile Val Glu Glu Gly Tyr Thr Leu Ser
690 695 700
Asp Ile Leu Asn Glu Ile Thr Lys Glu Asp Leu Arg Tyr Leu Arg Leu
705 710 715 720
Arg Gly Gly Leu Leu Cys Arg Leu Trp Ser Ala Val Ser Gln Tyr Arg
725 730 735
Arg Ala Gln Glu Ala Ser Glu Thr Lys Asp Lys Ala
740 745

<210> 452

<211> 572

<212> PRT

<213> Homo sapiens

<400> 452

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | His | Phe | Lys | Leu | Val | Ala | Ile | Val | Gly | Tyr | Leu | Ile | Arg | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Ile | Lys | Ser | Ile | Gln | Ile | Glu | Ala | Asp | Asn | Cys | Val | Thr | Asp | Ser |
| | | | | 20 | | | | 25 | | | | | 30 | | |
| Leu | Thr | Ile | Tyr | Asp | Ser | Leu | Leu | Pro | Ile | Arg | Ser | Ser | Ile | Leu | Tyr |
| | | | | 35 | | | | 40 | | | | | 45 | | |
| Arg | Ile | Cys | Glu | Pro | Thr | Arg | Thr | Leu | Met | Ser | Phe | Val | Ser | Thr | Asn |
| | | | | 50 | | | | 55 | | | | 60 | | | |
| Asn | Leu | Met | Leu | Val | Thr | Phe | Lys | Ser | Pro | His | Ile | Arg | Arg | Leu | Ser |
| | | | | 65 | | | 70 | | | | 75 | | | 80 | |
| Gly | Ile | Arg | Ala | Tyr | Phe | Glu | Val | Ile | Pro | Glu | Gln | Lys | Cys | Glu | Asn |
| | | | | 85 | | | | 90 | | | | | 95 | | |
| Thr | Val | Leu | Val | Lys | Asp | Ile | Thr | Gly | Phe | Glu | Gly | Lys | Ile | Ser | Ser |
| | | | | 100 | | | | 105 | | | | | 110 | | |
| Pro | Tyr | Tyr | Pro | Ser | Tyr | Tyr | Pro | Pro | Lys | Cys | Lys | Cys | Thr | Trp | Lys |
| | | | | 115 | | | | 120 | | | | 125 | | | |
| Phe | Gln | Thr | Ser | Leu | Ser | Thr | Leu | Gly | Ile | Ala | Leu | Lys | Phe | Tyr | Asn |
| | | | | 130 | | | | 135 | | | | 140 | | | |
| Tyr | Ser | Ile | Thr | Lys | Lys | Ser | Met | Lys | Gly | Cys | Glu | His | Gly | Trp | Trp |
| | | | | 145 | | | | 150 | | | 155 | | | 160 | |
| Glu | Ile | Asn | Glu | His | Met | Tyr | Cys | Gly | Ser | Tyr | Met | Asp | His | Gln | Thr |
| | | | | 165 | | | | 170 | | | | 175 | | | |
| Ile | Phe | Arg | Val | Pro | Ser | Pro | Leu | Val | His | Ile | Gln | Leu | Gln | Cys | Ser |
| | | | | 180 | | | | 185 | | | | 190 | | | |
| Ser | Arg | Leu | Ser | Asp | Lys | Pro | Leu | Leu | Ala | Glu | Tyr | Gly | Ser | Tyr | Asn |
| | | | | 195 | | | | 200 | | | | 205 | | | |

Ile Ser Gln Pro Cys Pro Val Gly Ser Phe Arg Cys Ser Ser Gly Leu
210 215 220
Cys Val Pro Gln Ala Gln Arg Cys Asp Gly Val Asn Asp Cys Phe Asp
225 230 235 240
Glu Ser Asp Glu Leu Phe Cys Val Ser Pro Gln Pro Ala Cys Asn Thr
245 250 255
Ser Ser Phe Arg Gln His Gly Pro Leu Ile Cys Asp Gly Phe Arg Asp
260 265 270
Cys Glu Asn Gly Arg Asp Glu Gln Asn Cys Thr Gln Ser Ile Pro Cys
275 280 285
Asn Asn Arg Thr Phe Lys Cys Gly Asn Asp Ile Cys Phe Arg Lys Gln
290 295 300
Asn Ala Lys Cys Asp Gly Thr Val Asp Cys Pro Asp Gly Ser Asp Glu
305 310 315 320
Glu Gly Cys Thr Cys Ser Arg Ser Ser Ser Ala Leu His Arg Ile Ile
325 330 335
Gly Gly Thr Asp Thr Leu Glu Gly Gly Trp Pro Trp Gln Val Ser Leu
340 345 350
His Phe Val Gly Ser Ala Tyr Cys Gly Ala Ser Val Ile Ser Arg Glu
355 360 365
Trp Leu Leu Ser Ala Ala His Cys Phe His Gly Asn Arg Leu Ser Asp
370 375 380
Pro Thr Pro Trp Thr Ala His Leu Gly Met Tyr Val Gln Gly Asn Ala
385 390 395 400
Lys Phe Val Ser Pro Val Arg Arg Ile Val Val His Glu Tyr Tyr Asn
405 410 415
Ser Gln Thr Phe Asp Tyr Asp Ile Ala Leu Leu Gln Leu Ser Ile Ala
420 425 430
Trp Pro Glu Thr Leu Lys Gln Leu Ile Gln Pro Ile Cys Ile Pro Pro

<210> 453

<211> 134

<212> PRT

<213> Homo sapiens

<400> 453

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Gln Ser Thr Ala Asp Tyr Gly Met Arg Thr Ser Gly Pro Val Glu Ser
 35 40 45
 Gly Leu Ser Ala Asp Ser Leu Gln Leu Leu Cys Ser Tyr Ala Ala Ile
 50 55 60
 Lys Asn Ser Ala Glu Leu Leu Met Val Gly Pro Gln Gly Met Arg Pro
 65 70 75 80
 Ala Thr Gly Gln Asp Leu Leu Cys Arg Pro Cys Leu Ser His Asp Leu
 85 90 95
 Pro Gly Pro Leu His Pro Pro Arg Gly Leu Ser Gly Ser Ser Ser Leu
 100 105 110
 Leu Ile Ser Pro Arg Leu Gln Asp Val Ser Leu Gln Leu Val His Pro
 115 120 125
 Thr Pro Glu Glu Ser Phe
 130

<210> 454

<211> 184

<212> PRT

<213> Homo sapiens

<400> 454

Met Pro Phe Arg Lys Ala Cys Gly Pro Lys Leu Thr Asn Ser Pro Thr
 1 5 10 15
 Val Ile Val Met Val Gly Leu Pro Ala Arg Gly Lys Thr Tyr Ile Ser
 20 25 30
 Lys Lys Leu Thr Arg Tyr Leu Tyr Trp Ile Gly Val Pro Thr Lys Val
 35 40 45
 Phe Asn Val Gly Glu Tyr Arg Arg Glu Ala Val Lys Gln Tyr Ser Ser

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| 50 | 55 | 60 | | | | | | | | | | | | | | | | | |
| Tyr | Asn | Phe | Phe | Arg | Pro | Asp | Asn | Glu | Glu | Ala | Met | Lys | Val | Arg | Lys | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | | | | |
| Gln | Cys | Ala | Leu | Ala | Ala | Leu | Arg | Asp | Val | Lys | Ser | Tyr | Leu | Ala | Lys | | | | |
| | | | 85 | | | | | | 90 | | | | | | 95 | | | | |
| Glu | Gly | Gly | Gln | Ile | Ala | Val | Phe | Asp | Ala | Thr | Asn | Thr | Thr | Arg | Glu | | | | |
| | | | 100 | | | | | | 105 | | | | | | 110 | | | | |
| Arg | Arg | His | Met | Ile | Leu | His | Phe | Ala | Lys | Glu | Asn | Asp | Phe | Lys | Ala | | | | |
| | | | 115 | | | | | | 120 | | | | | | 125 | | | | |
| Phe | Phe | Ile | Glu | Ser | Val | Cys | Asp | Asp | Pro | Thr | Val | Val | Ala | Ser | Asn | | | | |
| | | | 130 | | | | | | 135 | | | | | | 140 | | | | |
| Ile | Met | Gln | Lys | Ala | Phe | Gln | Arg | Asp | Leu | Ser | Ala | Thr | Pro | Leu | Trp | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | | |
| Cys | Cys | Arg | Lys | Leu | Lys | Ser | Pro | Ala | Arg | Ile | Thr | Lys | Thr | Ala | Thr | | | | |
| | | | 165 | | | | | | 170 | | | | | | 175 | | | | |
| Arg | Gln | Lys | Pro | Trp | Thr | Thr | Ser | | | | | | | | | | | | |
| | | | 180 | | | | | | | | | | | | | | | | |

<210> 455

<211> 493

<212> PRT

<213> Homo sapiens

<400> 455

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Pro | Thr | Ser | Val | Leu | Arg | Ala | Gly | Leu | Thr | Pro | Ser | Cys | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Pro | Pro | Ser | Gly | Ala | Thr | Asn | Gly | Ser | Val | Ser | Pro | Leu | Gly | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Ala Gln Arg Val Trp Thr Glu Pro Gly Gly Arg Gly Leu His Gly Ala
 35 40 45
 Thr Ala Ala Gly Pro Val Ala Ala Ala Cys Pro Leu Leu Ala Val Thr
 50 55 60
 Ala Thr Ala Pro Gly Gln Pro Ser Gly Ala Ser Thr Val Trp Val Arg
 65 70 75 80
 Glu Gly Gly Thr Ala Pro Ala Thr Arg Met Thr Val Pro Leu Ala Pro
 85 90 95
 Arg Thr Ser Glu Lys Cys Ser Val Leu Asn Leu Thr Ala Ser Leu Ser
 100 105 110
 Val Gly Asn Ser Thr Ser Gly Lys Arg Thr Gly Glu Ala Cys Ser Leu
 115 120 125
 Thr Cys Leu Ala Glu Gly Phe Asn Phe Tyr Thr Glu Arg Ala Ala Ala
 130 135 140
 Val Val Asp Gly Thr Pro Cys Arg Pro Asp Thr Val Asp Ile Cys Val
 145 150 155 160
 Ser Gly Glu Cys Lys His Val Gly Cys Asp Arg Val Leu Gly Ser Asp
 165 170 175
 Leu Arg Glu Asp Lys Cys Arg Val Cys Gly Gly Asp Gly Ser Ala Cys
 180 185 190
 Glu Thr Ile Glu Gly Val Phe Ser Pro Ala Ser Pro Gly Ala Gly Tyr
 195 200 205
 Glu Asp Val Val Trp Ile Pro Lys Gly Ser Val His Ile Phe Ile Gln
 210 215 220
 Asp Leu Asn Leu Ser Leu Asn His Leu Ala Leu Lys Gly Asp Gln Glu
 225 230 235 240
 Ser Leu Leu Leu Glu Gly Leu Pro Gly Thr Pro Gln Pro His Arg Leu
 245 250 255
 Pro Leu Ala Gly Thr Thr Phe Gln Leu Arg Gln Gly Pro Asp Gln Val

| | | |
|---|-----|-----|
| 260 | 265 | 270 |
| Gln Ser Leu Glu Ala Leu Gly Pro Ile Asn Ala Ser Leu Ile Val Met | | |
| 275 | 280 | 285 |
| Val Leu Ala Arg Thr Glu Leu Pro Ala Leu Arg Tyr Arg Phe Asn Ala | | |
| 290 | 295 | 300 |
| Pro Ile Ala Arg Asp Ser Leu Pro Pro Tyr Ser Trp His Tyr Ala Pro | | |
| 305 | 310 | 315 |
| Trp Thr Arg Cys Ser Ala Gln Cys Ala Gly Gly Ser Gln Val Gln Ala | | |
| 325 | 330 | 335 |
| Val Glu Cys Arg Asn Gln Leu Asp Gly Ser Ala Val Ala Pro His Tyr | | |
| 340 | 345 | 350 |
| Cys Ser Ala His Ser Lys Leu Pro Lys Arg Gln Arg Ala Cys Asn Thr | | |
| 355 | 360 | 365 |
| Glu Pro Cys Pro Pro Asp Trp Val Val Gly Asn Trp Ser Leu Cys Ser | | |
| 370 | 375 | 380 |
| Arg Ser Cys Asp Ala Gly Val Arg Ser Arg Ser Val Val Cys Gln Arg | | |
| 385 | 390 | 395 |
| Arg Val Ser Ala Ala Glu Glu Lys Ala Leu Asp Asp Ser Ala Cys Pro | | |
| 405 | 410 | 415 |
| Gln Pro Arg Pro Pro Val Leu Glu Ala Cys His Gly Pro Thr Cys Pro | | |
| 420 | 425 | 430 |
| Pro Glu Trp Ala Ala Leu Asp Trp Ser Glu Cys Thr Pro Ser Cys Gly | | |
| 435 | 440 | 445 |
| Pro Gly Leu Arg His Arg Val Val Leu Cys Lys Ser Ala Asp His Arg | | |
| 450 | 455 | 460 |
| Ala Thr Leu Pro Pro Ala His Cys Ser Pro Ala Ala Lys Pro Pro Ala | | |
| 465 | 470 | 475 |
| Thr Met Arg Cys Asn Leu Arg Arg Cys Pro Pro Ala Arg | | |
| 485 | 490 | |

<210> 456

<211> 803

<212> PRT

<213> Homo sapiens

<400> 456

```

Met Ile Ser Ala Gln Cys Asn Leu Cys Leu Pro Gly Ser Gly Asp Ser
  1             5             10             15
Cys Ala Ser Gly Ser Gln Leu Ala Gly Thr Thr Val Ala Gly Pro Ala
          20             25             30
His Pro Glu Ser Leu Thr Leu Cys Ser Gly Glu Ala Glu Arg Arg Gly
          35             40             45
Lys Glu Glu Trp Pro Asp Ser His His Tyr Pro Gly Pro Thr Pro Ala
          50             55             60
Pro Glu Ser Ser Asp Gly Pro His Lys Val Thr Val Leu Ala Thr Met
          65             70             75             80
Leu Ser Ser Arg Trp Trp Pro Ser Ser Trp Gly Ile Leu Gly Leu Gly
          85             90             95
Pro Arg Ser Pro Pro Arg Gly Ser Gln Leu Cys Ala Leu Tyr Ala Phe
          100            105            110
Thr Tyr Thr Gly Ala Asp Gly Gln Gln Val Ser Leu Ala Glu Gly Asp
          115            120            125
Arg Phe Leu Leu Leu Arg Lys Thr Asn Ser Asp Trp Trp Leu Ala Arg
          130            135            140
Arg Leu Glu Ala Pro Ser Thr Ser Arg Pro Ile Phe Val Pro Ala Ala
          145            150            155            160
Tyr Met Ile Glu Glu Ser Ile Pro Ser Gln Ser Pro Thr Thr Val Ile

```

| | | |
|---|-------------------------------------|-----|
| 165 | 170 | 175 |
| Pro Gly Gln Leu Leu Trp Thr | Pro Gly Pro Lys Leu Phe His Gly Ser | |
| 180 | 185 | 190 |
| Leu Glu Glu Leu Ser Gln Ala Leu Pro Ser Arg Ala Gln Ala Ser Ser | | |
| 195 | 200 | 205 |
| Glu Gln Pro Pro Pro Leu Pro Arg Lys Met Cys Arg Ser Val Ser Thr | | |
| 210 | 215 | 220 |
| Asp Asn Leu Ser Pro Ser Leu Leu Lys Pro Phe Gln Glu Gly Pro Ser | | |
| 225 | 230 | 235 |
| Gly Arg Ser Leu Ser Gln Glu Asn Leu Pro Pro Glu Ala Ser Ala Ser | | |
| 245 | 250 | 255 |
| Thr Ala Gly Pro Gln Pro Leu Met Ser Glu Pro Pro Val Tyr Cys Asn | | |
| 260 | 265 | 270 |
| Leu Val Asp Leu Arg Arg Cys Pro Arg Ser Pro Pro Pro Gly Pro Ala | | |
| 275 | 280 | 285 |
| Cys Pro Leu Leu Gln Arg Pro Asp Ala Trp Glu Gln His Leu Asp Pro | | |
| 290 | 295 | 300 |
| Asn Ser Gly Arg Cys Phe Tyr Ile Asn Ser Leu Thr Gly Cys Lys Ser | | |
| 305 | 310 | 315 |
| Trp Lys Pro Pro Arg Arg Ser Arg Ser Glu Thr Asn Pro Gly Ser Met | | |
| 325 | 330 | 335 |
| Glu Gly Thr Gln Thr Leu Lys Arg Asn Asn Asp Val Leu Gln Pro Gln | | |
| 340 | 345 | 350 |
| Ala Lys Gly Phe Arg Ser Asp Thr Gly Thr Pro Glu Pro Leu Asp Pro | | |
| 355 | 360 | 365 |
| Gln Gly Ser Leu Ser Leu Ser Gln Arg Thr Ser Gln Leu Asp Pro Pro | | |
| 370 | 375 | 380 |
| Ala Leu Gln Ala Pro Arg Pro Leu Pro Gln Leu Leu Asp Asp Pro His | | |
| 385 | 390 | 395 |
| | | 400 |

Glu Val Glu Lys Ser Gly Leu Leu Asn Met Thr Lys Ile Ala Gln Gly
 405 410 415
 Gly Arg Lys Leu Arg Lys Asn Trp Gly Pro Ser Trp Val Val Leu Thr
 420 425 430
 Gly Asn Ser Leu Val Phe Tyr Arg Glu Pro Pro Pro Thr Ala Pro Ser
 435 440 445
 Ala Gly Trp Gly Pro Ala Gly Ser Arg Pro Glu Ser Ser Val Asp Leu
 450 455 460
 Arg Gly Ala Ala Leu Ala His Gly Arg His Leu Ser Ser Arg Arg Asn
 465 470 475 480
 Val Leu His Ile Arg Thr Ile Pro Gly His Glu Phe Leu Leu Gln Ser
 485 490 495
 Asp His Glu Thr Glu Leu Arg Ala Trp His Arg Ala Leu Arg Thr Val
 500 505 510
 Ile Glu Arg Leu Asp Arg Glu Asn Pro Leu Glu Leu Arg Leu Ser Gly
 515 520 525
 Ser Gly Pro Ala Glu Leu Ser Ala Gly Glu Asp Glu Glu Glu Glu Ser
 530 535 540
 Glu Leu Val Ser Lys Pro Leu Leu Arg Leu Ser Ser Arg Arg Ser Ser
 545 550 555 560
 Ile Arg Gly Pro Glu Gly Thr Glu Gln Asn Arg Val Arg Asn Lys Leu
 565 570 575
 Lys Arg Leu Ile Ala Lys Arg Pro Pro Leu Gln Ser Leu Gln Glu Arg
 580 585 590
 Gly Leu Leu Arg Asp Gln Val Phe Gly Cys Gln Leu Glu Ser Leu Cys
 595 600 605
 Gln Arg Glu Gly Asp Thr Val Pro Ser Phe Leu Arg Leu Cys Ile Ala
 610 615 620
 Ala Val Asp Lys Arg Gly Leu Asp Val Asp Gly Ile Tyr Arg Val Ser

| | | | |
|---|-----|-----|-----|
| 625 | 630 | 635 | 640 |
| Gly Asn Leu Ala Val Val Gln Lys Leu Arg Phe Leu Val Asp Arg Glu | | | |
| | 645 | 650 | 655 |
| Arg Ala Val Thr Ser Asp Gly Arg Tyr Val Phe Pro Glu Gln Pro Gly | | | |
| | 660 | 665 | 670 |
| Gln Glu Gly Arg Leu Asp Leu Asp Ser Thr Glu Trp Asp Asp Ile His | | | |
| | 675 | 680 | 685 |
| Val Val Thr Gly Ala Leu Lys Leu Phe Leu Arg Glu Leu Pro Gln Pro | | | |
| | 690 | 695 | 700 |
| Leu Val Pro Pro Leu Leu Leu Pro His Phe Arg Ala Ala Leu Ala Leu | | | |
| 705 | 710 | 715 | 720 |
| Ser Gln Ile Gln Glu Leu Ile Gly Ser Met Pro Lys Pro Asn His Asp | | | |
| | 725 | 730 | 735 |
| Thr Leu Arg Tyr Leu Leu Glu His Leu Cys Arg Val Ile Ala His Ser | | | |
| | 740 | 745 | 750 |
| Asp Lys Asn Arg Met Thr Pro His Asn Leu Gly Ile Val Phe Gly Pro | | | |
| | 755 | 760 | 765 |
| Thr Leu Phe Arg Pro Glu Gln Glu Thr Ser Asp Pro Ala Ala His Ala | | | |
| | 770 | 775 | 780 |
| Leu Tyr Pro Gly Gln Leu Val Gln Leu Met Leu Thr Asn Phe Thr Ser | | | |
| 785 | 790 | 795 | 800 |
| Leu Phe Pro | | | |

<210> 457

<211> 892

<212> PRT

<213> Homo sapiens

<400> 457

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Asp | Leu | Lys | Lys | Tyr | Lys | Lys | Lys | Lys | Gln | Lys | Arg | Met | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Arg | Lys | Val | Arg | Lys | Pro | Thr | Glu | Asn | Gln | Glu | Lys | Asn | Ile | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Arg | Glu | Arg | Arg | Lys | Lys | Ser | Lys | Arg | Arg | Lys | Arg | Glu | Lys | His |
| | | | 35 | | | | 40 | | | | | | 45 | | |
| Lys | His | Asn | Ser | Pro | Ser | Ser | Asp | Asp | Ser | Ser | Asp | Tyr | Ser | Leu | Asp |
| | 50 | | | | | | 55 | | | | | 60 | | | |
| Ser | Asp | Val | Glu | His | Thr | Glu | Ser | Ser | His | Lys | Lys | Arg | Thr | Gly | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Tyr | Arg | Asp | Tyr | Asp | Ile | Pro | Phe | Thr | Gln | Arg | Gly | His | Ile | Ser | Gly |
| | | | | | 85 | | | | 90 | | | | | 95 | |
| Ser | Tyr | Ile | Thr | Ser | Lys | Lys | Gly | Gln | His | Asn | Lys | Lys | Phe | Lys | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Lys | Glu | Tyr | Asp | Glu | Tyr | Ser | Thr | Tyr | Ser | Asp | Asp | Asn | Phe | Gly | Asn |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Tyr | Ser | Asp | Asp | Asn | Phe | Gly | Asn | Tyr | Gly | Gln | Glu | Thr | Glu | Glu | Asp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Phe | Ala | Asn | Gln | Leu | Lys | Gln | Tyr | Arg | Gln | Ala | Lys | Glu | Thr | Ser | Asn |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Ile | Ala | Leu | Gly | Ser | Ser | Phe | Ser | Lys | Glu | Ser | Gly | Lys | Lys | Gln | Arg |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Met | Lys | Gly | Val | Gln | Gln | Gly | Ile | Glu | Gln | Arg | Val | Lys | Ser | Phe | Asn |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Val | Gly | Arg | Gly | Arg | Gly | Leu | Pro | Lys | Lys | Ile | Lys | Arg | Lys | Glu | Arg |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gly | Gly | Arg | Thr | Asn | Lys | Gly | Pro | Asn | Val | Phe | Ser | Val | Ser | Asp | Asp |

| | | |
|---|-----|-----|
| 210 | 215 | 220 |
| Phe Gln Glu Tyr Asn Lys Pro Gly Lys Lys Trp Lys Val Met Thr Gln | | |
| 225 | 230 | 235 |
| Glu Phe Ile Asn Gln His Thr Val Glu His Lys Gly Lys Gln Ile Cys | | |
| 245 | 250 | 255 |
| Lys Tyr Phe Leu Glu Gly Arg Cys Ile Lys Gly Asp Gln Cys Lys Phe | | |
| 260 | 265 | 270 |
| Asp His Asp Ala Glu Leu Glu Lys Arg Lys Glu Ile Cys Lys Phe Tyr | | |
| 275 | 280 | 285 |
| Leu Gln Gly Tyr Cys Thr Lys Gly Glu Asn Cys Ile Tyr Met His Asn | | |
| 290 | 295 | 300 |
| Glu Phe Pro Cys Lys Phe Tyr His Ser Gly Ala Lys Cys Tyr Gln Gly | | |
| 305 | 310 | 315 |
| Asp Asn Cys Lys Phe Ser His Asp Asp Leu Thr Lys Glu Thr Lys Lys | | |
| 325 | 330 | 335 |
| Leu Leu Asp Lys Val Leu Asn Thr Asp Glu Glu Leu Ile Asn Glu Asp | | |
| 340 | 345 | 350 |
| Glu Arg Glu Leu Glu Glu Leu Arg Lys Arg Gly Ile Thr Pro Leu Pro | | |
| 355 | 360 | 365 |
| Lys Pro Pro Pro Gly Val Gly Leu Leu Pro Thr Pro Pro Glu His Phe | | |
| 370 | 375 | 380 |
| Pro Phe Ser Asp Pro Glu Asp Asp Phe Gln Thr Asp Phe Ser Asp Asp | | |
| 385 | 390 | 395 |
| Phe Arg Lys Ile Pro Ser Leu Phe Glu Ile Val Val Lys Pro Thr Val | | |
| 405 | 410 | 415 |
| Asp Leu Ala His Lys Ile Gly Arg Lys Pro Pro Ala Phe Tyr Thr Ser | | |
| 420 | 425 | 430 |
| Ala Ser Pro Pro Gly Pro Gln Phe Gln Gly Ser Ser Pro His Pro Gln | | |
| 435 | 440 | 445 |

His Ile Tyr Ser Ser Gly Ser Ser Pro Gly Pro Gly Pro Asn Met Ser
 450 455 460
 Gln Gly His Ser Ser Pro Val Met His Pro Gly Ser Pro Gly His His
 465 470 475 480
 Pro Cys Ala Gly Pro Pro Gly Leu Pro Val Pro Gln Ser Pro Pro Leu
 485 490 495
 Pro Pro Gly Pro Pro Glu Ile Val Gly Pro Gln Asn Gln Ala Gly Val
 500 505 510
 Leu Val Gln Pro Asp Thr Ser Leu Thr Pro Pro Ser Met Gly Gly Ala
 515 520 525
 Tyr His Ser Pro Gly Phe Pro Gly His Val Met Lys Val Pro Arg Glu
 530 535 540
 Asn His Cys Ser Pro Gly Ser Ser Tyr Gln Gln Ser Pro Gly Glu Met
 545 550 555 560
 Gln Leu Asn Thr Asn Tyr Glu Ser Leu Gln Asn Pro Ala Glu Phe Tyr
 565 570 575
 Asp Asn Tyr Tyr Ala Gln His Ser Ile His Asn Phe Gln Pro Pro Asn
 580 585 590
 Asn Ser Gly Asp Gly Met Trp His Gly Glu Phe Ala Gln Gln Gln Pro
 595 600 605
 Pro Val Val Gln Asp Ser Pro Asn His Gly Ser Gly Ser Asp Gly Ser
 610 615 620
 Ser Thr Arg Thr Gly His Gly Pro Leu Pro Val Pro Gly Leu Leu Pro
 625 630 635 640
 Ala Val Gln Arg Ala Leu Phe Val Arg Leu Thr Gln Arg Tyr Gln Glu
 645 650 655
 Asp Glu Glu Gln Thr Ser Thr Gln Pro His Arg Ala Pro Ser Lys Glu
 660 665 670
 Glu Asp Asp Thr Val Asn Trp Tyr Ser Ser Ser Glu Glu Glu Glu Gly

675 680 685
Ser Ser Val Lys Ser Ile Leu Lys Thr Leu Gln Lys Gln Thr Glu Thr
690 695 700
Leu Arg Asn Gln Gln Gln Pro Ser Thr Glu Leu Ser Thr Pro Thr Asp
705 710 715 720
Pro Arg Leu Ala Lys Glu Lys Ser Lys Gly Asn Gln Val Val Asp Pro
725 730 735
Arg Leu Arg Thr Ile Pro Arg Gln Asp Ile Arg Lys Pro Ser Glu Ser
740 745 750
Ala Pro Leu Asp Leu Arg Leu Ala Trp Asp Pro Arg Lys Leu Arg Gly
755 760 765
Asn Gly Ser Gly His Ile Gly Ser Ser Val Gly Gly Ala Lys Phe Asp
770 775 780
Leu His His Ala Asn Ala Gly Thr Asn Val Lys His Lys Arg Gly Asp
785 790 795 800
Asp Asp Asp Glu Asp Thr Glu Arg Glu Leu Gly Glu Lys Ala Phe Leu
805 810 815
Ile Pro Leu Asp Ala Ser Pro Gly Ile Met Leu Gln Asp Pro Arg Ser
820 825 830
Gln Leu Arg Gln Phe Ser His Ile Lys Lys Asp Ile Thr Leu Thr Lys
835 840 845
Pro Asn Phe Ala Lys His Ile Val Trp Ala Pro Glu Asp Leu Leu Pro
850 855 860
Val Pro Leu Pro Lys Pro Asp Pro Val Ser Ser Ile Asn Leu Pro Leu
865 870 875 880
Pro Pro Leu Ile Ala Asp Gln Arg Leu Asn Arg Leu
885 890

<210> 458

<211> 891

<212> PRT

<213> Homo sapiens

<400> 458

Met Ala Leu Thr Gln Gly Pro Leu Thr Phe Arg Asp Val Ala Ile Glu

1 5 10 15

Phe Ser Gln Glu Glu Trp Lys Ser Leu Asp Pro Val Gln Lys Ala Leu

20 25 30

Tyr Trp Asp Val Met Leu Glu Asn Tyr Arg Asn Leu Val Phe Leu Gly

35 40 45

Ile Leu Pro Lys Cys Met Thr Lys Glu Leu Pro Pro Ile Gly Asn Ser

50 55 60

Asn Thr Gly Glu Lys Cys Gln Thr Val Thr Leu Glu Arg His Glu Cys

65 70 75 80

Tyr Asp Val Glu Asn Phe Tyr Leu Arg Glu Ile Gln Lys Asn Leu Gln

85 90 95

Asp Leu Glu Phe Gln Trp Lys Asp Gly Glu Ile Asn Tyr Lys Glu Val

100 105 110

Pro Met Thr Tyr Lys Asn Asn Leu Asn Gly Lys Arg Gly Gln His Ser

115 120 125

Gln Glu Asp Val Glu Asn Lys Cys Ile Glu Asn Gln Leu Thr Leu Ser

130 135 140

Phe Gln Ser Arg Leu Thr Glu Leu Gln Lys Phe Gln Thr Glu Gly Lys

145 150 155 160

Ile Tyr Glu Cys Asn Gln Ser Glu Lys Thr Val Asn Asn Ser Ser Leu

165 170 175

Val Ser Pro Leu Gln Arg Ile Leu Pro Ser Val Gln Thr Asn Ile Ser

| | | |
|---|-----|-----|
| 180 | 185 | 190 |
| Lys Lys Tyr Glu Asn Glu Phe Leu Gln Leu Ser Leu Pro Thr Gln Leu | | |
| 195 | 200 | 205 |
| Glu Lys Thr His Ile Arg Glu Lys Pro Tyr Ile Cys Lys Gly Cys Gly | | |
| 210 | 215 | 220 |
| Lys Ala Phe Arg Val Ser Ser Ser Leu Ile Asn His Gln Met Val His | | |
| 225 | 230 | 235 |
| Thr Thr Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe His | | |
| 245 | 250 | 255 |
| Arg Gly Ser Leu Leu Thr Ile His Gln Ile Val His Thr Arg Gly Lys | | |
| 260 | 265 | 270 |
| Pro Tyr Gln Cys Gly Val Cys Gly Lys Ile Phe Arg Gln Asn Ser Asp | | |
| 275 | 280 | 285 |
| Leu Val Asn His Arg Arg Ser His Thr Gly Glu Lys Pro Tyr Lys Cys | | |
| 290 | 295 | 300 |
| Asn Glu Cys Gly Lys Ser Phe Ser Gln Ser Tyr Asn Leu Ala Ile His | | |
| 305 | 310 | 315 |
| Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly | | |
| 325 | 330 | 335 |
| Lys Thr Phe Lys Gln Gly Ser Cys Leu Thr Thr His Gln Ile Ile His | | |
| 340 | 345 | 350 |
| Thr Gly Glu Lys Pro Tyr Gln Cys Asp Ile Cys Gly Lys Val Phe Arg | | |
| 355 | 360 | 365 |
| Gln Asn Ser Asn Leu Val Asn His Gln Arg Ile His Thr Gly Glu Lys | | |
| 370 | 375 | 380 |
| Pro Tyr Lys Cys Asn Ile Cys Gly Lys Ser Phe Ser Gln Ser Ser Asn | | |
| 385 | 390 | 395 |
| Leu Ala Thr His Gln Thr Val His Ser Gly Asn Lys Pro Tyr Lys Cys | | |
| 405 | 410 | 415 |

Asp Glu Cys Gly Lys Thr Phe Lys Arg Ser Ser Ser Leu Thr Thr His
420 425 430
Gln Val Ile His Thr Gly Glu Lys Pro Tyr Thr Cys Asp Val Cys Asp
435 440 445
Lys Val Phe Ser Gln Arg Ser Gln Leu Ala Arg His Gln Arg Gly His
450 455 460
Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Ser
465 470 475 480
Gln Thr Ser His Leu Val Gly His Arg Arg Ile His Thr Gly Glu Lys
485 490 495
Pro Tyr Lys Cys Asp Lys Cys Gly Lys Ala Phe Lys Gln Gly Ser Leu
500 505 510
Leu Thr Arg His Lys Ile Ile His Thr Arg Glu Lys Arg Tyr Gln Cys
515 520 525
Gly Glu Cys Gly Lys Val Phe Ser Glu Asn Ser Cys Leu Val Arg His
530 535 540
Leu Arg Ile His Thr Gly Glu Gln Pro Tyr Lys Cys Asn Val Cys Gly
545 550 555 560
Lys Val Phe Asn Tyr Ser Gly Asn Leu Ser Ile His Lys Arg Ile Arg
565 570 575
Thr Gly Glu Lys Pro Phe Gln Cys Asn Glu Cys Gly Thr Val Phe Arg
580 585 590
Asn Tyr Ser Cys Leu Ala Arg His Leu Arg Ile His Thr Gly Gln Lys
595 600 605
Pro Tyr Lys Cys Asn Val Cys Gly Lys Val Phe Asn Asp Ser Gly Asn
610 615 620
Leu Ser Asn His Lys Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys
625 630 635 640
Asn Glu Cys Gly Lys Val Phe Ser Tyr Tyr Ser Cys Leu Ala Arg His

| | | |
|---|-----|-----|
| 645 | 650 | 655 |
| Arg Lys Ile His Ala Gly Glu Lys Pro Tyr Lys Cys Asn Asp Cys Gly | | |
| 660 | 665 | 670 |
| Lys Ala Tyr Thr Gln Arg Ser Ser Leu Thr Lys His Leu Ile Ile His | | |
| 675 | 680 | 685 |
| Thr Gly Glu Lys Pro Tyr Asn Cys Asn Glu Phe Gly Gly Ala Phe Ile | | |
| 690 | 695 | 700 |
| Gln Ser Ser Lys Leu Ala Arg Tyr His Arg Asn Pro Thr Gly Glu Lys | | |
| 705 | 710 | 715 |
| 720 | | |
| Pro His Lys Cys Ser His Cys Gly Arg Thr Phe Ser His Ile Thr Gly | | |
| 725 | 730 | 735 |
| Leu Thr Tyr His Gln Arg Arg His Thr Gly Glu Met Pro Tyr Lys Cys | | |
| 740 | 745 | 750 |
| Ile Glu Cys Gly Gln Val Phe Asn Ser Thr Ser Asn Leu Ala Arg His | | |
| 755 | 760 | 765 |
| Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly | | |
| 770 | 775 | 780 |
| Lys Val Phe Arg His Gln Ser Thr Leu Ala Arg His Arg Ser Ile His | | |
| 785 | 790 | 795 |
| 800 | | |
| Thr Gly Glu Lys Pro Tyr Val Cys Ser Glu Cys Gly Lys Ala Phe Arg | | |
| 805 | 810 | 815 |
| Val Arg Ser Ile Leu Val Asn His Gln Lys Met His Thr Gly Asp Lys | | |
| 820 | 825 | 830 |
| Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Ile Glu Arg Ser Lys | | |
| 835 | 840 | 845 |
| Leu Val Tyr His Gln Arg Asn His Thr Gly Glu Lys Pro Tyr Lys Cys | | |
| 850 | 855 | 860 |
| Ile Glu Cys Gly Lys Ala Phe Gly Arg Phe Ser Cys Leu Asn Lys His | | |
| 865 | 870 | 875 |
| 880 | | |

Gln Met Ile His Ser Gly Glu Lys Pro Tyr Lys

885

890

<210> 459

<211> 374

<212> PRT

<213> Homo sapiens

<400> 459

Met Ile Glu Tyr Gln Ile Pro Val Ser Phe Lys Asp Val Val Val Gly

1

5

10

15

Phe Thr Gln Glu Glu Trp His Arg Leu Ser Pro Ala Gln Arg Ala Leu

20

25

30

Tyr Arg Asp Val Met Leu Glu Thr Tyr Ser Asn Leu Ala Ser Val Gly

35

40

45

Tyr Glu Gly Thr Lys Pro Asp Val Ile Leu Arg Leu Glu Gln Glu Glu

50

55

60

Ala Pro Trp Ile Gly Glu Ala Ala Cys Pro Gly Cys His Cys Trp Glu

65

70

75

80

Asp Ile Trp Arg Val Asn Ile Gln Arg Lys Arg Arg Gln Asp Met Leu

85

90

95

Leu Arg Pro Gly Ala Ala Ile Ser Lys Lys Thr Leu Pro Lys Glu Lys

100

105

110

Ser Cys Glu Tyr Asn Lys Phe Gly Lys Ile Ser Leu Leu Ser Thr Asp

115

120

125

Leu Phe Ser Ser Ile Gln Ser Pro Ser Asn Trp Asn Pro Cys Gly Lys

130

135

140

Asn Leu Asn His Asn Leu Asp Leu Ile Gly Phe Lys Arg Asn Cys Ala

145 150 155 160
Lys Lys Gln Asp Glu Cys Tyr Ala Tyr Gly Lys Leu Leu Gln Arg Ile
 165 170 175
Asn His Gly Arg Arg Pro Asn Gly Glu Lys Pro Arg Gly Cys Ser His
 180 185 190
Cys Glu Lys Ala Phe Thr Gln Asn Pro Ala Leu Met Tyr Lys Pro Ala
 195 200 205
Val Ser Asp Ser Leu Leu Tyr Lys Arg Lys Arg Val Pro Pro Thr Glu
 210 215 220
Lys Pro His Val Cys Ser Glu Cys Gly Lys Ala Phe Cys Tyr Lys Ser
225 230 235 240
Glu Phe Ile Arg His Gln Arg Ser His Thr Gly Glu Lys Pro Tyr Gly
 245 250 255
Cys Thr Asp Cys Gly Lys Ala Phe Ser His Lys Ser Thr Leu Ile Lys
 260 265 270
His Gln Arg Ile His Thr Gly Val Arg Pro Phe Glu Cys Phe Phe Cys
 275 280 285
Gly Lys Ala Phe Thr Gln Lys Ser His Arg Thr Glu His Gln Arg Thr
 290 295 300
His Thr Gly Glu Arg Pro Phe Val Cys Ser Glu Cys Gly Lys Ser Phe
305 310 315 320
Gly Glu Lys Ser Tyr Leu Asn Val His Arg Lys Met His Thr Gly Glu
 325 330 335
Arg Pro Tyr Arg Cys Arg Glu Cys Gly Lys Ser Phe Ser Gln Lys Ser
 340 345 350
Cys Leu Asn Lys His Trp Arg Thr His Phe Gly Glu Ser Ser Leu Arg
 355 360 365
Ser Lys Ser Ser Asn Thr
 370

<210> 460

<211> 896

<212> PRT

<213> Homo sapiens

<400> 460

Met Thr Glu Glu Ser Glu Glu Thr Val Leu Tyr Ile Glu His Arg Tyr

1 5 10 15

Val Cys Ser Glu Cys Asn Gln Leu Tyr Gly Ser Leu Glu Glu Val Leu

20 25 30

Met His Gln Asn Ser His Val Pro Gln Gln His Phe Glu Leu Val Gly

35 40 45

Val Ala Asp Pro Gly Val Thr Val Ala Thr Asp Thr Ala Ser Gly Thr

50 55 60

Gly Leu Tyr Gln Thr Leu Val Gln Glu Ser Gln Tyr Gln Cys Leu Glu

65 70 75 80

Cys Gly Gln Leu Leu Met Ser Pro Ser Gln Leu Leu Glu His Gln Glu

85 90 95

Leu His Leu Lys Met Met Ala Pro Gln Glu Ala Val Pro Ala Glu Pro

100 105 110

Ser Pro Lys Ala Pro Pro Leu Ser Ser Ser Thr Ile His Tyr Glu Cys

115 120 125

Val Asp Cys Lys Ala Leu Phe Ala Ser Gln Glu Leu Trp Leu Asn His

130 135 140

Arg Gln Thr His Leu Arg Ala Thr Pro Thr Lys Ala Pro Ala Pro Val

145 150 155 160

Val Leu Gly Ser Pro Val Val Leu Gly Pro Pro Val Gly Gln Ala Arg

| | | |
|---|-----|-----|
| 165 | 170 | 175 |
| Val Ala Val Glu His Ser Tyr Arg Lys Ala Glu Glu Gly Gly Glu Gly | | |
| 180 | 185 | 190 |
| Ala Thr Val Pro Ser Ala Ala Ala Thr Thr Thr Glu Val Val Thr Glu | | |
| 195 | 200 | 205 |
| Val Glu Leu Leu Leu Tyr Lys Cys Ser Glu Cys Ser Gln Leu Phe Gln | | |
| 210 | 215 | 220 |
| Leu Pro Ala Asp Phe Leu Glu His Gln Ala Thr His Phe Pro Ala Pro | | |
| 225 | 230 | 235 |
| Val Pro Glu Ser Gln Glu Pro Ala Leu Gln Gln Glu Val Gln Ala Ser | | |
| 245 | 250 | 255 |
| Ser Pro Ala Glu Val Pro Val Ser Gln Pro Asp Pro Leu Pro Ala Ser | | |
| 260 | 265 | 270 |
| Asp His Ser Tyr Glu Leu Arg Asn Gly Glu Ala Ile Gly Arg Asp Arg | | |
| 275 | 280 | 285 |
| Arg Gly Arg Arg Ala Arg Arg Asn Asn Ser Gly Glu Ala Gly Gly Ala | | |
| 290 | 295 | 300 |
| Ala Thr Gln Glu Leu Phe Cys Ser Ala Cys Asp Gln Leu Phe Leu Ser | | |
| 305 | 310 | 315 |
| Pro His Gln Leu Gln Gln His Leu Arg Ser His Arg Glu Gly Val Phe | | |
| 325 | 330 | 335 |
| Lys Cys Pro Leu Cys Ser Arg Val Phe Pro Ser Pro Ser Ser Leu Asp | | |
| 340 | 345 | 350 |
| Gln His Leu Gly Asp His Ser Ser Glu Ser His Phe Leu Cys Val Asp | | |
| 355 | 360 | 365 |
| Cys Gly Leu Ala Phe Gly Thr Glu Ala Leu Leu Leu Ala His Arg Arg | | |
| 370 | 375 | 380 |
| Ala His Thr Pro Asn Pro Leu His Ser Cys Pro Cys Gly Lys Thr Phe | | |
| 385 | 390 | 395 |
| | | 400 |

Val Asn Leu Thr Lys Phe Leu Tyr His Arg Arg Thr His Gly Val Gly
405 410 415
Gly Val Pro Leu Pro Thr Thr Pro Val Pro Pro Glu Glu Pro Val Ile
420 425 430
Gly Phe Pro Glu Pro Ala Pro Ala Glu Thr Gly Glu Pro Glu Ala Pro
435 440 445
Glu Pro Pro Val Ser Glu Glu Thr Ser Ala Gly Pro Ala Ala Pro Gly
450 455 460
Thr Tyr Arg Cys Leu Leu Cys Ser Arg Glu Phe Gly Lys Ala Leu Gln
465 470 475 480
Leu Thr Arg His Gln Arg Phe Val His Arg Leu Glu Arg Arg His Lys
485 490 495
Cys Ser Ile Cys Gly Lys Met Phe Lys Lys Lys Ser His Val Arg Asn
500 505 510
Arg Leu Arg Thr His Thr Gly Glu Arg Pro Phe Pro Cys Pro Asp Cys
515 520 525
Ser Lys Pro Phe Asn Ser Pro Ala Asn Leu Ala Arg His Arg Leu Thr
530 535 540
His Thr Gly Glu Arg Pro Tyr Arg Cys Gly Asp Cys Gly Lys Ala Phe
545 550 555 560
Thr Gln Ser Ser Thr Leu Arg Gln His Arg Leu Val His Ala Gln His
565 570 575
Phe Pro Tyr Arg Cys Gln Glu Cys Gly Val Arg Phe His Arg Pro Tyr
580 585 590
Arg Leu Leu Met His Arg Tyr His His Thr Gly Glu Tyr Pro Tyr Lys
595 600 605
Cys Arg Glu Cys Pro Arg Ser Phe Leu Leu Arg Arg Leu Leu Glu Val
610 615 620
His Gln Leu Val Val His Ala Gly Arg Gln Pro His Arg Cys Pro Ser

625 630 635 640
Cys Gly Ala Ala Phe Pro Ser Ser Leu Arg Leu Arg Glu His Arg Cys
 645 650 655
Ala Ala Ala Ala Ala Gln Ala Pro Arg Arg Phe Glu Cys Gly Thr Cys
 660 665 670
Gly Lys Lys Val Gly Ser Ala Ala Arg Leu Gln Ala His Glu Ala Ala
 675 680 685
His Ala Ala Ala Gly Pro Gly Glu Val Leu Ala Lys Glu Pro Pro Ala
 690 695 700
Pro Arg Ala Pro Arg Ala Thr Arg Ala Pro Val Ala Ser Pro Ala Ala
705 710 715 720
Leu Gly Ser Thr Ala Thr Ala Ser Pro Ala Ala Pro Ala Arg Arg Arg
 725 730 735
Gly Leu Glu Cys Ser Glu Cys Lys Lys Leu Phe Ser Thr Glu Thr Ser
 740 745 750
Leu Gln Val His Arg Arg Ile His Thr Gly Glu Arg Pro Tyr Pro Cys
 755 760 765
Pro Asp Cys Gly Lys Ala Phe Arg Gln Ser Thr His Leu Lys Asp His
 770 775 780
Arg Arg Leu His Thr Gly Glu Arg Pro Phe Ala Cys Glu Val Cys Gly
785 790 795 800
Lys Ala Phe Ala Ile Ser Met Arg Leu Ala Glu His Arg Arg Ile His
 805 810 815
Thr Gly Glu Arg Pro Tyr Ser Cys Pro Asp Cys Gly Lys Ser Tyr Arg
 820 825 830
Ser Phe Ser Asn Leu Trp Lys His Arg Lys Thr His Gln Gln Gln His
 835 840 845
Gln Ala Ala Val Arg Gln Gln Leu Ala Glu Ala Glu Ala Ala Val Gly
 850 855 860

Leu Ala Val Met Glu Thr Ala Val Glu Ala Leu Pro Leu Val Glu Ala
 865 870 875 880
 Ile Glu Ile Tyr Pro Leu Ala Glu Ala Glu Gly Val Gln Ile Ser Gly
 885 890 895

<210> 461

<211> 464

<212> PRT

<213> Homo sapiens

<400> 461

Met Phe Glu Asn Glu Ser Arg Lys Ile Phe Ser Glu Met Pro Glu Gly
 1 5 10 15
 Glu Ser Ala Gln His Ser Asp Gly Glu Ser Asp Phe Glu Arg Asp Ala
 20 25 30
 Gly Ile Gln Arg Leu Gln Gly His Thr Pro Gly Glu Asp His Gly Glu
 35 40 45
 Val Val Ser Gln Asp Arg Glu Val Gly Gln Leu Ile Gly Leu Gln Gly
 50 55 60
 Thr Tyr Leu Gly Glu Lys Pro Tyr Glu Cys Pro Gln Cys Gly Lys Thr
 65 70 75 80
 Phe Ser Pro Lys Ser His Leu Ile Thr His Glu Arg Thr His Thr Gly
 85 90 95
 Glu Lys Tyr Tyr Lys Cys Asp Glu Cys Gly Lys Ser Phe Ser Asp Gly
 100 105 110
 Ser Asn Phe Ser Arg His Gln Thr Thr His Thr Gly Glu Lys Pro Tyr
 115 120 125
 Lys Cys Arg Asp Cys Gly Lys Ser Phe Ser Arg Ser Ala Asn Leu Ile

130 135 140
Thr His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys Ala Glu
145 150 155 160
Cys Gly Lys Ser Phe Ser Arg Ser Pro Asn Leu Ile Ala His Gln Arg
165 170 175
Thr His Thr Gly Glu Lys Pro Tyr Ser Cys Pro Glu Cys Gly Lys Ser
180 185 190
Phe Gly Asn Arg Ser Ser Leu Asn Thr His Gln Gly Ile His Thr Gly
195 200 205
Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly Glu Ser Phe Ser Tyr Asn
210 215 220
Ser Asn Leu Ile Arg His Gln Arg Ile His Thr Gly Glu Glu Pro Tyr
225 230 235 240
Lys Cys Thr Asp Cys Gly Gln Arg Phe Ser Gln Ser Ser Ala Leu Ile
245 250 255
Thr His Arg Arg Thr His Thr Gly Glu Lys Pro Tyr Gln Cys Ser Glu
260 265 270
Cys Gly Lys Ser Phe Ser Arg Ser Ser Asn Leu Ala Thr His Arg Arg
275 280 285
Thr His Met Val Glu Lys Pro Tyr Lys Cys Gly Val Cys Gly Lys Ser
290 295 300
Phe Ser Gln Ser Ser Ser Leu Ile Ala His Gln Gly Met His Thr Gly
305 310 315 320
Glu Lys Pro Tyr Glu Cys Leu Thr Cys Gly Glu Ser Phe Ser Trp Ser
325 330 335
Ser Asn Leu Leu Lys His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr
340 345 350
Lys Cys Ser Glu Cys Gly Lys Cys Phe Ser Gln Arg Ser Gln Leu Val
355 360 365

Val His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Leu Met

370

375

380

Cys Gly Lys Ser Phe Ser Arg Gly Ser Ile Leu Val Met His Gln Arg

385

390

395

400

Ala His Leu Gly Asp Lys Pro Tyr Arg Cys Pro Glu Cys Gly Lys Gly

405

410

415

Phe Ser Trp Asn Ser Val Leu Ile Ile His Gln Arg Ile His Thr Gly

420

425

430

Glu Lys Pro Tyr Lys Cys Pro Glu Cys Gly Lys Gly Phe Ser Asn Ser

435

440

445

Ser Asn Phe Ile Thr His Gln Arg Thr His Met Lys Glu Lys Leu Tyr

450

455

460

<210> 462

<211> 347

<212> PRT

<213> Homo sapiens

<400> 462

Met Ser Gly Pro Gly Asn Lys Arg Ala Ala Gly Asp Gly Gly Ser Gly

1

5

10

15

Pro Pro Glu Lys Lys Leu Ser Arg Glu Glu Lys Thr Thr Thr Thr Leu

20

25

30

Ile Glu Pro Ile Arg Leu Gly Gly Ile Ser Ser Thr Glu Glu Met Asp

35

40

45

Leu Lys Val Leu Gln Phe Lys Asn Lys Lys Leu Ala Glu Arg Leu Glu

50

55

60

Gln Arg Gln Ala Cys Glu Asp Glu Leu Arg Glu Arg Ile Glu Lys Leu

| | | | |
|---|-----|-----|-----|
| 65 | 70 | 75 | 80 |
| Glu Lys Arg Gln Ala Thr Asp Asp Ala Thr Leu Leu Ile Val Asn Arg | | | |
| | 85 | 90 | 95 |
| Tyr Trp Ala Gln Leu Asp Glu Thr Val Glu Ala Leu Leu Arg Cys His | | | |
| | 100 | 105 | 110 |
| Glu Ser Arg Ile Arg Glu Leu Glu Glu Arg Asp Arg Arg Glu Ser Lys | | | |
| | 115 | 120 | 125 |
| Lys Ile Ala Asp Glu Asp Ala Leu Arg Arg Ile Arg Gln Ala Glu Glu | | | |
| | 130 | 135 | 140 |
| Gln Ile Glu His Leu Gln Arg Lys Leu Gly Ala Thr Lys Gln Glu Glu | | | |
| | 145 | 150 | 155 |
| Glu Ala Leu Leu Ser Glu Met Asp Ala Gln Leu Leu Thr Val Gln Lys | | | |
| | 165 | 170 | 175 |
| Leu Glu Glu Lys Glu Arg Ala Leu Gln Gly Ser Leu Gly Gly Val Glu | | | |
| | 180 | 185 | 190 |
| Lys Glu Leu Thr Leu Arg Ser Gln Ala Leu Glu Leu Asn Lys Arg Lys | | | |
| | 195 | 200 | 205 |
| Ala Val Glu Ala Ala Gln Leu Ala Glu Asp Leu Lys Val Gln Leu Glu | | | |
| | 210 | 215 | 220 |
| His Val Gln Thr Arg Leu Arg Glu Ile Gln Pro Cys Leu Ala Glu Ser | | | |
| | 225 | 230 | 235 |
| Arg Ala Ala Arg Glu Lys Glu Ser Phe Asn Leu Lys Arg Ala Gln Glu | | | |
| | 245 | 250 | 255 |
| Asp Ile Ser Arg Leu Arg Arg Lys Leu Glu Lys Gln Arg Lys Val Glu | | | |
| | 260 | 265 | 270 |
| Val Tyr Ala Asp Ala Asp Glu Ile Leu Gln Glu Glu Ile Lys Glu Tyr | | | |
| | 275 | 280 | 285 |
| Lys Ala Arg Leu Thr Cys Pro Cys Cys Asn Thr Arg Lys Lys Asp Ala | | | |
| | 290 | 295 | 300 |

Val Leu Thr Lys Cys Phe His Val Phe Cys Phe Glu Cys Val Arg Gly
 305 310 315 320
 Arg Tyr Glu Ala Arg Gln Arg Lys Cys Pro Lys Cys Asn Ala Ala Phe
 325 330 335
 Gly Ala His Asp Phe His Arg Ile Tyr Ile Ser
 340 345

<210> 463

<211> 997

<212> PRT

<213> Homo sapiens

<400> 463

Met Glu Ala Ser Trp Arg Gln Val Ala Gly Gly Arg Gly Arg Ser Arg
 1 5 10 15
 Gly Arg Ala Thr Ala Ala Pro Ser Gly Asn Gly Val His Leu Arg Gly
 20 25 30
 Ala Gly Gly Gly Arg Glu Lys Gly Ser Val Gly Ala Val Pro Ser Gly
 35 40 45
 Thr Ser Pro Gly Gly Val Ala Thr Thr Ala Ala Ala Gly Ser Arg His
 50 55 60
 Ser Pro Ala Gly Ser Gln Ala Leu Gln Thr Thr Ala Ala Ser Glu Leu
 65 70 75 80
 Met Ser Gln Lys Lys Phe Glu Glu Ile Lys Lys Ala Asn Gln Ala Ala
 85 90 95
 Ala Arg Lys Leu Val Glu Glu Gln Phe Ser Ser Ser Ser Glu Glu Gly
 100 105 110
 Asp Glu Asp Phe Glu Gly Lys Gln Gly Lys Ile Leu Ala Asn Thr Phe

| | | |
|---|-----|-----|
| 115 | 120 | 125 |
| Ile Thr Tyr Thr Thr Gln Thr Asp Gly Asp Thr Arg Glu Leu Glu Arg | | |
| 130 | 135 | 140 |
| Thr Lys Gln Tyr Val Asn Glu Ala Phe Gln Ala Gly Ala Met Thr Cys | | |
| 145 | 150 | 155 |
| Leu Ile Cys Ile Ala Ser Val Lys Arg Asn Gln Ala Val Trp Ser Cys | | |
| 165 | 170 | 175 |
| Ser Gly Cys Phe Cys Ile Phe His Met Pro Cys Ile Gln Lys Trp Ala | | |
| 180 | 185 | 190 |
| Lys Asp Ser Gln Phe Leu Val Ser Ser Val Thr Asp Asp Asp Phe Gly | | |
| 195 | 200 | 205 |
| Lys Lys Asp Cys Pro Trp Pro Cys Pro Lys Cys Arg Phe Glu Tyr Lys | | |
| 210 | 215 | 220 |
| Arg Ser Glu Thr Pro Ser Arg Tyr Tyr Cys Tyr Cys Gly Lys Val Glu | | |
| 225 | 230 | 235 |
| Asp Pro Pro Leu Asp Pro Trp Leu Val Pro His Ser Cys Gly Gln Val | | |
| 245 | 250 | 255 |
| Cys Glu Arg Glu Phe Lys Pro Pro Cys Gly His Lys Cys Leu Leu Leu | | |
| 260 | 265 | 270 |
| Cys His Pro Gly Pro Cys Pro Pro Cys Pro Lys Met Val Thr Thr Thr | | |
| 275 | 280 | 285 |
| Cys Tyr Cys Lys Lys Ala Lys Pro Ile Pro Arg Arg Cys Ser Ala Lys | | |
| 290 | 295 | 300 |
| Glu Trp Ser Cys Gln Leu Pro Cys Gly Gln Lys Leu Leu Cys Gly Gln | | |
| 305 | 310 | 315 |
| His Lys Cys Glu Asn Pro Cys His Ala Gly Ser Cys Gln Pro Cys Pro | | |
| 325 | 330 | 335 |
| Arg Val Ser Arg Gln Lys Cys Val Cys Gly Lys Lys Val Ala Glu Arg | | |
| 340 | 345 | 350 |

Ser Cys Ala Ser Pro Leu Trp His Cys Asp Gln Val Cys Gly Lys Thr
355 360 365
Leu Pro Cys Gly Asn His Thr Cys Glu Gln Val Cys His Val Gly Ala
370 375 380
Cys Gly Glu Cys Pro Arg Ser Gly Lys Arg Phe Cys Pro Cys Gln Lys
385 390 395 400
Ser Lys Phe Ser Leu Pro Cys Thr Glu Asp Val Pro Thr Cys Gly Asp
405 410 415
Ser Cys Asp Lys Val Leu Glu Cys Gly Ile His Arg Cys Ser Gln Arg
420 425 430
Cys His Arg Gly Pro Cys Glu Thr Cys Arg Gln Glu Val Glu Lys His
435 440 445
Cys Arg Cys Gly Lys His Thr Lys Arg Met Pro Cys His Lys Pro Tyr
450 455 460
Leu Cys Glu Thr Lys Cys Val Lys Met Arg Asp Cys Gln Lys His Gln
465 470 475 480
Cys Arg Arg Lys Cys Cys Pro Gly Asn Cys Pro Pro Cys Asp Gln Asn
485 490 495
Cys Gly Arg Thr Leu Gly Cys Arg Asn His Lys Cys Pro Ser Val Cys
500 505 510
His Arg Gly Ser Cys Tyr Pro Cys Pro Glu Thr Val Asp Val Lys Cys
515 520 525
Asn Cys Gly Asn Thr Lys Val Thr Val Pro Cys Gly Arg Glu Arg Thr
530 535 540
Thr Arg Pro Pro Lys Cys Lys Glu Gln Cys Ser Arg Pro Pro Thr Cys
545 550 555 560
His His Thr Ser Gln Glu Lys His Arg Cys His Phe Gly Ser Cys Pro
565 570 575
Pro Cys His Gln Pro Cys Gln Lys Val Leu Glu Lys Cys Gly His Leu

580 585 590
Cys Pro Ala Pro Cys His Asp Gln Ala Leu Ile Lys Gln Thr Gly Arg
595 600 605
His Gln Pro Thr Gly Pro Trp Glu Gln Pro Ser Glu Pro Ala Phe Ile
610 615 620
Gln Thr Ala Leu Pro Cys Pro Pro Cys Gln Val Pro Ile Pro Met Glu
625 630 635 640
Cys Leu Gly Lys His Glu Val Ser Pro Leu Pro Cys His Ala Val Gly
645 650 655
Pro Tyr Ser Cys Lys Arg Val Cys Gly Arg Ile Leu Asp Cys Gln Asn
660 665 670
His Thr Cys Met Lys Glu Cys His Lys Val Thr Lys Thr Asp Gly Cys
675 680 685
Thr Gly Lys Asn Lys Ala Gly Pro Glu Cys Leu His Cys Glu Glu Gly
690 695 700
Cys Ser Lys Ser Arg Pro Leu Gly Cys Leu His Pro Cys Ile Leu Arg
705 710 715 720
Cys His Pro Gly Glu Cys Pro Pro Cys Val Gln Met Leu Arg Ile Lys
725 730 735
Cys His Cys Lys Ile Thr Ser Leu Tyr Val Glu Cys Arg Lys Ile Thr
740 745 750
Thr Ala Asp Val Asn Glu Lys Asn Leu Leu Ser Cys Cys Lys Asn Gln
755 760 765
Cys Pro Lys Glu Leu Pro Cys Gly His Arg Cys Lys Glu Met Cys His
770 775 780
Pro Gly Glu Cys Pro Phe Asn Cys Asn Gln Lys Val Lys Leu Arg Cys
785 790 795 800
Pro Cys Lys Arg Ile Lys Lys Glu Leu Gln Cys Asn Lys Val Arg Glu
805 810 815

Asn Gln Val Ser Ile Glu Cys Asp Thr Thr Cys Lys Glu Met Lys Arg
 820 825 830
 Lys Ala Ser Glu Ile Lys Glu Ala Glu Ala Lys Ala Ala Leu Glu Glu
 835 840 845
 Glu Lys Arg Arg Gln Gln Ala Glu Leu Glu Ala Phe Glu Asn Arg Leu
 850 855 860
 Lys Thr Asn His Ile Gly His Thr Gly Tyr Leu Asn Thr Val Thr Val
 865 870 875 880
 Ser Pro Asp Gly Ser Leu Cys Ala Ser Gly Gly Lys Asp Gly Gln Ala
 885 890 895
 Met Leu Trp Asp Leu Asn Glu Gly Lys His Leu Tyr Thr Leu Asp Gly
 900 905 910
 Gly Asp Ile Ile Asn Ala Leu Cys Phe Ser Pro Asn Arg Tyr Trp Leu
 915 920 925
 Cys Ala Ala Thr Gly Pro Ser Ile Lys Ile Trp Asp Leu Glu Gly Lys
 930 935 940
 Ile Ile Val Asp Glu Leu Lys Gln Glu Val Ile Ser Thr Ser Ser Lys
 945 950 955 960
 Ala Glu Pro Pro Gln Cys Thr Ser Leu Ala Trp Ser Ala Asp Gly Gln
 965 970 975
 Thr Leu Phe Ala Gly Tyr Thr Asp Asn Leu Val Arg Val Trp Gln Val
 980 985 990
 Thr Ile Gly Thr Arg
 995

<210> 464

<211> 709

<212> PRT

<213> Homo sapiens

<400> 464

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Met Lys Arg Cys Arg Ser Asp Glu Leu Gln Gln Gln Gln Gly Glu Glu
  1             5             10             15
Asp Gly Ala Gly Leu Glu Asp Ala Ala Ser His Leu Pro Gly Ala Asp
      20             25             30
Leu Arg Pro Gly Glu Thr Thr Gly Ala Asn Ser Ala Gly Gly Pro Thr
      35             40             45
Ser Asp Ala Gly Ala Ala Ala Ala Pro Asn Pro Gly Pro Arg Ser Lys
      50             55             60
Pro Pro Asp Leu Lys Lys Ile Gln Gln Leu Ser Glu Gly Ser Met Phe
      65             70             75             80
Gly His Gly Leu Lys His Leu Phe His Ser Arg Arg Arg Ser Arg Glu
      85             90             95
Arg Glu His Gln Thr Ser Gln Asp Ser Gln Gln His Gln Gln Gln Gln
      100            105            110
Gly Met Ser Asp His Asp Ser Pro Asp Glu Lys Glu Arg Ser Pro Glu
      115            120            125
Met His Arg Val Ser Tyr Ala Met Ser Leu His Asp Leu Pro Ala Arg
      130            135            140
Pro Thr Ala Phe Asn Arg Val Leu Gln Gln Ile Arg Ser Arg Pro Ser
      145            150            155            160
Ile Lys Arg Gly Ala Ser Leu His Ser Ser Ser Gly Gly Gly Ser Ser
      165            170            175
Gly Ser Ser Ser Arg Arg Thr Lys Ser Ser Ser Leu Glu Pro Gln Arg
      180            185            190
Gly Ser Pro His Leu Leu Arg Lys Ala Pro Gln Asp Ser Ser Leu Ala
      195            200            205

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Ala Ile Leu His Gln His Gln Cys Arg Pro Arg Ser Ser Ser Thr Thr
210 215 220
Asp Thr Ala Leu Leu Leu Ala Asp Gly Ser Asn Val Tyr Leu Leu Ala
225 230 235 240
Glu Glu Ala Glu Gly Ile Gly Asp Lys Val Asp Lys Gly Asp Leu Val
245 250 255
Ala Leu Ser Leu Pro Ala Gly His Gly Asp Thr Asp Gly Pro Ile Ser
260 265 270
Leu Asp Val Pro Asp Gly Ala Pro Asp Pro Gln Arg Thr Lys Ala Ala
275 280 285
Ile Asp His Leu His Gln Lys Ile Leu Lys Ile Thr Glu Gln Ile Lys
290 295 300
Ile Glu Gln Glu Ala Arg Asp Asp Asn Val Ala Glu Tyr Leu Lys Leu
305 310 315 320
Ala Asn Asn Ala Asp Lys Gln Gln Val Ser Arg Ile Lys Gln Val Phe
325 330 335
Glu Lys Lys Asn Gln Lys Ser Ala Gln Thr Ile Ala Gln Leu His Lys
340 345 350
Lys Leu Glu His Tyr Arg Arg Arg Leu Lys Glu Ile Glu Gln Asn Gly
355 360 365
Pro Ser Arg Gln Pro Lys Asp Val Leu Arg Asp Met Gln Gln Gly Leu
370 375 380
Lys Asp Val Gly Ala Asn Val Arg Ala Gly Ile Ser Gly Phe Gly Gly
385 390 395 400
Gly Val Val Glu Gly Val Lys Gly Ser Leu Ser Gly Leu Ser Gln Ala
405 410 415
Thr His Thr Ala Val Val Ser Lys Pro Arg Glu Phe Ala Ser Leu Ile
420 425 430
Arg Asn Lys Phe Gly Ser Ala Asp Asn Ile Ala His Leu Lys Asp Pro

435 440 445
Leu Glu Asp Gly Pro Pro Glu Glu Ala Ala Arg Ala Leu Ser Gly Ser
450 455 460
Ala Thr Leu Val Ser Ser Pro Lys Tyr Gly Ser Asp Asp Glu Cys Ser
465 470 475 480
Ser Ala Ser Ala Ser Ser Ala Gly Ala Gly Ser Asn Ser Gly Ala Gly
485 490 495
Pro Gly Gly Ala Leu Gly Ser Pro Lys Ser Asn Ala Leu Tyr Gly Ala
500 505 510
Pro Gly Asn Leu Asp Ala Leu Leu Glu Glu Leu Arg Glu Ile Lys Glu
515 520 525
Gly Gln Ser His Leu Glu Asp Ser Met Glu Asp Leu Lys Thr Gln Leu
530 535 540
Gln Arg Asp Tyr Thr Tyr Met Thr Gln Cys Leu Gln Glu Glu Arg Tyr
545 550 555 560
Arg Tyr Glu Arg Leu Glu Glu Gln Leu Asn Asp Leu Thr Glu Leu His
565 570 575
Gln Asn Glu Met Thr Asn Leu Lys Gln Glu Leu Ala Ser Met Glu Glu
580 585 590
Lys Val Ala Tyr Gln Ser Tyr Glu Arg Ala Arg Asp Ile Gln Glu Ala
595 600 605
Val Glu Ser Cys Leu Thr Arg Val Thr Lys Leu Glu Leu Gln Gln Gln
610 615 620
Gln Gln Gln Val Val Gln Leu Glu Gly Val Glu Asn Ala Asn Ala Arg
625 630 635 640
Ala Leu Leu Gly Lys Phe Ile Asn Val Ile Leu Ala Leu Met Ala Val
645 650 655
Leu Leu Val Phe Val Ser Thr Ile Ala Asn Phe Ile Thr Pro Leu Met
660 665 670

Lys Thr Arg Leu Arg Ile Thr Ser Thr Thr Leu Leu Val Leu Val Leu
 675 680 685
 Phe Leu Leu Trp Lys His Trp Asp Ser Leu Thr Tyr Leu Leu Glu His
 690 695 700
 Val Leu Leu Pro Ser
 705

<210> 465

<211> 335

<212> PRT

<213> Homo sapiens

<400> 465

Met Gln Arg His Val Met Val Ala Asn Pro Ser Val Leu Cys Ser His
 1 5 10 15
 Phe Asn Gln Asp Leu Trp Pro Glu Gln Ser Ile Lys Asp Ser Phe Gln
 20 25 30
 Lys Leu Ile Leu Arg Arg His Lys Lys Cys Gly His Asp Asn Leu Gln
 35 40 45
 Leu Lys Lys Gly Cys Glu Ser Val Asp Lys Cys Lys Val His Lys Arg
 50 55 60
 Gly Tyr Asn Gly Leu Asn Gln Cys Leu Thr Thr Thr Gln Ser Lys Met
 65 70 75 80
 Phe Gln Cys Asp Lys His Gly Lys Val Phe His Gln Phe Ser Asn Thr
 85 90 95
 Asn Arg His Lys Ile Arg His Thr Gly Lys Asn Pro Cys Lys Phe Thr
 100 105 110
 Glu Cys Gly Lys Ala Phe Asn Arg Ser Ser Thr Phe Thr Thr His Lys

| | | | |
|---|-----|-----|-----|
| 115 | 120 | 125 | |
| Lys Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Ile Glu Cys Gly Lys | | | |
| 130 | 135 | 140 | |
| Ala Phe Asn Arg Ser Ser His Leu Thr Thr His Lys Ile Ile His Thr | | | |
| 145 | 150 | 155 | 160 |
| Gly Glu Lys Arg Tyr Lys Cys Glu Asp Cys Gly Lys Ala Phe Asn Arg | | | |
| 165 | 170 | 175 | |
| Ser Ser Asn Leu Thr Thr His Lys Lys Ile His Thr Gly Glu Lys Pro | | | |
| 180 | 185 | 190 | |
| Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Lys Arg Ser Ser Ile Leu | | | |
| 195 | 200 | 205 | |
| Thr Thr His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu | | | |
| 210 | 215 | 220 | |
| Glu Cys Gly Lys Val Phe Lys Tyr Leu Ser Ser Leu Ser Thr His Lys | | | |
| 225 | 230 | 235 | 240 |
| Ile Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys | | | |
| 245 | 250 | 255 | |
| Ala Phe Asn Trp Ser Ser His Leu Thr Thr His Lys Arg Ile His Thr | | | |
| 260 | 265 | 270 | |
| Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys Gly Phe Lys Tyr | | | |
| 275 | 280 | 285 | |
| Ser Ser Thr Leu Thr Lys His Lys Ile Ile His Thr Gly Glu Lys Pro | | | |
| 290 | 295 | 300 | |
| Tyr Lys Cys Glu Glu Cys Arg Ser Leu Arg Ser Gln Cys Asp Gln Leu | | | |
| 305 | 310 | 315 | 320 |
| Glu Glu Arg Val Ser Val Met Glu Asp Glu Met Asn Gly Met Lys | | | |
| 325 | 330 | 335 | |

<210> 466

<211> 505

<212> PRT

<213> Homo sapiens

<400> 466

Met Lys Ala Gln Arg Glu Arg Leu Gln Ile Pro Gly Leu Thr Leu Asp

1 5 10 15

Leu Thr Pro Arg Ser Leu Ser Pro Thr Pro Ser Ser Pro Gly Ser Pro

20 25 30

Cys Ser Pro Leu Leu Ala Phe His Phe Trp Ser Cys Arg Thr Ser Asn

35 40 45

Arg Lys Ser Leu Ile Gly Asn Gly Gln Ser Pro Ala Leu Pro Arg Pro

50 55 60

His Ser Pro Leu Ser Ala His Ala Gly Asn Ser Pro Gln Asp Ser Pro

65 70 75 80

Arg Asn Phe Ser Pro Ser Ala Ser Ala His Phe Ser Phe Ala Arg Arg

85 90 95

Asn Asp Arg Thr Asp Gly Arg Arg Trp Ser Leu Ala Ser Leu Pro Ser

100 105 110

Ser Gly Tyr Gly Thr Asn Thr Pro Ser Ser Thr Val Ser Ser Ser Cys

115 120 125

Ser Ser Gln Glu Lys Leu His Gln Leu Pro Tyr Gln Pro Thr Pro Asp

130 135 140

Glu Leu His Phe Leu Ser Lys His Phe Cys Thr Thr Glu Ser Ile Ala

145 150 155 160

Thr Glu Asn Arg Cys Arg Asn Thr Pro Met His Pro Arg Ser Arg Ser

165 170 175

Leu Ser Pro Gly Arg Ser Pro Ala Cys Cys Asp His Glu Ile Ile Met

180 185 190
Met Asn His Val Tyr Lys Glu Arg Phe Pro Lys Ala Thr Ala Gln Met
195 200 205
Glu Glu Arg Leu Lys Glu Ile Ile Thr Ser Tyr Ser Pro Asp Asn Val
210 215 220
Leu Pro Leu Ala Asp Gly Val Leu Ser Phe Thr His His Gln Ile Ile
225 230 235 240
Glu Leu Ala Arg Asp Cys Leu Asp Lys Ser His Gln Gly Leu Ile Thr
245 250 255
Ser Arg Tyr Phe Leu Glu Leu Gln His Lys Leu Asp Lys Leu Leu Gln
260 265 270
Glu Ala His Asp Arg Ser Glu Ser Gly Glu Leu Ala Phe Ile Lys Gln
275 280 285
Leu Val Arg Lys Ile Leu Ile Val Ile Ala Arg Pro Ala Arg Leu Leu
290 295 300
Glu Cys Leu Glu Phe Asp Pro Glu Glu Phe Tyr Tyr Leu Leu Glu Ala
305 310 315 320
Ala Glu Gly His Ala Lys Glu Gly Gln Gly Ile Lys Thr Asp Ile Pro
325 330 335
Arg Tyr Ile Ile Ser Gln Leu Gly Leu Asn Lys Asp Pro Leu Glu Glu
340 345 350
Met Ala His Leu Gly Asn Tyr Asp Ser Gly Thr Ala Glu Thr Pro Glu
355 360 365
Thr Asp Glu Ser Val Ser Ser Ser Asn Ala Ser Leu Lys Leu Arg Arg
370 375 380
Lys Pro Arg Glu Ser Asp Phe Glu Thr Ile Lys Leu Ile Ser Asn Gly
385 390 395 400
Ala Tyr Gly Ala Val Tyr Phe Val Arg His Lys Glu Ser Arg Gln Arg
405 410 415

Phe Ala Met Lys Lys Ile Asn Lys Gln Asn Leu Ile Leu Arg Asn Gln
 420 425 430
 Ile Gln Gln Ala Phe Val Glu Arg Asp Ile Leu Thr Phe Ala Glu Asn
 435 440 445
 Pro Phe Val Val Ser Met Tyr Cys Ser Phe Glu Thr Arg Arg His Leu
 450 455 460
 Cys Met Val Met Glu Tyr Val Glu Gly Gly Asp Cys Ala Thr Leu Met
 465 470 475 480
 Lys Asn Thr Gly Pro Leu Pro Val Asp Met Ala Arg Met Tyr Phe Ala
 485 490 495
 Glu Thr Val Leu Ala Leu Glu Phe Thr
 500 505

<210> 467

<211> 408

<212> PRT

<213> Homo sapiens

<400> 467

Met Arg Glu Lys Ser Phe Gln Cys Asn Glu Ser Gly Lys Ala Phe Asn
 1 5 10 15
 Tyr Ser Ser Leu Leu Arg Lys His Gln Ile Ile His Leu Gly Glu Lys
 20 25 30
 Gln Tyr Lys Cys Asp Val Cys Gly Lys Val Phe Asn Arg Lys Arg Asn
 35 40 45
 Leu Val Cys His Arg Arg Cys His Thr Gly Glu Lys Pro Tyr Arg Cys
 50 55 60
 Asn Glu Cys Gly Lys Thr Phe Ser Gln Thr Tyr Ser Leu Thr Cys His

| | | | |
|---|-----|-----|-----|
| 65 | 70 | 75 | 80 |
| Arg Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Asp | | | |
| | 85 | 90 | 95 |
| Lys Ala Phe Ser Phe Lys Ser Asn Leu Lys Arg His Arg Arg Ile His | | | |
| | 100 | 105 | 110 |
| Ala Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser | | | |
| | 115 | 120 | 125 |
| Gln Thr Ser Ser Leu Thr Cys His Arg Arg Leu His Thr Gly Glu Lys | | | |
| | 130 | 135 | 140 |
| Pro Phe Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser Arg Lys Ser Ser | | | |
| | 145 | 150 | 155 |
| Leu Thr Cys His His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys | | | |
| | 165 | 170 | 175 |
| Asn Glu Cys Gly Lys Thr Phe Ser Gln Glu Leu Thr Leu Lys Cys His | | | |
| | 180 | 185 | 190 |
| Arg Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly | | | |
| | 195 | 200 | 205 |
| Lys Val Phe Asn Lys Lys Ala Asn Leu Ala Arg His His Arg Leu His | | | |
| | 210 | 215 | 220 |
| Ser Gly Glu Lys Pro Tyr Lys Cys Thr Glu Cys Val Lys Thr Phe Ser | | | |
| | 225 | 230 | 235 |
| Arg Asn Ser Ala Leu Val Ile His Lys Ala Ile His Ile Gly Glu Lys | | | |
| | 245 | 250 | 255 |
| Arg Tyr Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser Arg Ile Ser Ala | | | |
| | 260 | 265 | 270 |
| Leu Val Ile His Thr Ala Ile His Thr Gly Glu Lys Pro Tyr Lys Cys | | | |
| | 275 | 280 | 285 |
| Asn Glu Cys Gly Lys Gly Phe Asn Arg Lys Thr His Leu Ala Cys His | | | |
| | 290 | 295 | 300 |

His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly
 305 310 315 320
 Lys Val Phe Asn Arg Lys Thr His Leu Ala His His His Arg Leu His
 325 330 335
 Thr Gly Asp Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Asn
 340 345 350
 Gln Lys Ala His Leu Ala Arg His His Arg Leu His Thr Gly Glu Lys
 355 360 365
 Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Asn Gln Lys Ala Asn
 370 375 380
 Leu Ala Arg His His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Phe
 385 390 395 400
 Asn Glu Cys Gly Lys Ala Phe Asn
 405

<210> 468

<211> 596

<212> PRT

<213> Homo sapiens

<400> 468

Met Leu Pro Ser Gln Ala Gln Gly Leu Leu Trp Trp Val Phe Pro Leu
 1 5 10 15
 Phe Pro Ala Ser Ser Leu Ser Tyr Pro Pro Val Ser Tyr Arg Ala Asp
 20 25 30
 Gly Leu Ala Arg Asn Thr Phe Leu Lys Ala Cys Ser Glu Ser Ser Ser
 35 40 45
 Ser Ser Asn Ile Ser Thr Met Leu Val Thr His Asp Tyr Thr Ala Val

50 55 60
Lys Glu Asp Glu Ile Asn Val Tyr Gln Gly Glu Val Val Gln Ile Leu
65 70 75 80
Ala Ser Asn Gln Gln Asn Met Phe Leu Val Phe Arg Ala Ala Thr Asp
85 90 95
Gln Cys Pro Ala Ala Glu Gly Trp Ile Pro Gly Phe Val Leu Gly His
100 105 110
Thr Ser Ala Val Ile Val Glu Asn Pro Asp Gly Thr Leu Lys Lys Ser
115 120 125
Thr Ser Trp His Thr Ala Leu Arg Leu Arg Lys Lys Ser Glu Lys Lys
130 135 140
Asp Lys Asp Gly Lys Arg Glu Gly Lys Leu Glu Asn Gly Tyr Arg Lys
145 150 155 160
Ser Arg Glu Gly Leu Ser Asn Lys Val Ser Val Lys Leu Leu Asn Pro
165 170 175
Asn Tyr Ile Tyr Asp Val Pro Pro Glu Phe Val Ile Pro Leu Ser Glu
180 185 190
Val Thr Cys Glu Thr Gly Glu Thr Val Val Leu Arg Cys Arg Val Cys
195 200 205
Gly Arg Pro Lys Ala Ser Ile Thr Trp Lys Gly Pro Glu His Asn Thr
210 215 220
Leu Asn Asn Asp Gly His Tyr Ser Ile Ser Tyr Ser Asp Leu Gly Glu
225 230 235 240
Ala Thr Leu Lys Ile Val Gly Val Thr Thr Glu Asp Asp Gly Ile Tyr
245 250 255
Thr Cys Ile Ala Val Asn Asp Met Gly Ser Ala Ser Ser Ser Ala Ser
260 265 270
Leu Arg Val Leu Gly Pro Gly Met Asp Gly Ile Met Val Thr Trp Lys
275 280 285

Asp Asn Phe Asp Ser Phe Tyr Ser Glu Val Ala Glu Leu Gly Arg Gly
 290 295 300
 Arg Phe Ser Val Val Lys Lys Cys Asp Gln Lys Gly Thr Lys Arg Ala
 305 310 315 320
 Val Ala Thr Lys Phe Val Asn Lys Lys Leu Met Lys Arg Asp Gln Val
 325 330 335
 Thr His Glu Leu Gly Ile Leu Gln Ser Leu Gln His Pro Leu Leu Val
 340 345 350
 Gly Leu Leu Asp Thr Phe Glu Thr Pro Thr Ser Tyr Ile Leu Val Leu
 355 360 365
 Glu Met Ala Asp Gln Gly Arg Leu Leu Asp Cys Val Val Arg Trp Gly
 370 375 380
 Ser Leu Thr Glu Gly Lys Ile Arg Ala His Leu Gly Glu Val Leu Glu
 385 390 395 400
 Ala Val Arg Tyr Leu His Asn Cys Arg Ile Ala His Leu Asp Leu Lys
 405 410 415
 Pro Glu Asn Ile Leu Val Asp Glu Ser Leu Ala Lys Pro Thr Ile Lys
 420 425 430
 Leu Ala Asp Phe Gly Asp Ala Val Gln Leu Asn Thr Thr Tyr Tyr Ile
 435 440 445
 His Gln Leu Leu Gly Asn Pro Glu Phe Ala Ala Pro Glu Ile Ile Leu
 450 455 460
 Gly Asn Pro Val Ser Leu Thr Ser Asp Thr Trp Ser Val Gly Val Leu
 465 470 475 480
 Thr Tyr Val Leu Leu Ser Gly Val Ser Pro Phe Leu Asp Asp Ser Val
 485 490 495
 Glu Glu Thr Cys Leu Asn Ile Cys Arg Leu Asp Phe Ser Phe Pro Asp
 500 505 510
 Asp Tyr Phe Lys Gly Val Ser Gln Lys Ala Lys Glu Phe Val Cys Phe

515 520 525
 Leu Leu Gln Glu Asp Pro Ala Lys Arg Pro Ser Ala Ala Leu Ala Leu
 530 535 540
 Gln Glu Gln Trp Leu Gln Ala Gly Asn Gly Arg Ser Thr Gly Val Leu
 545 550 555 560
 Asp Thr Ser Arg Leu Thr Ser Phe Ile Glu Arg Arg Lys His Gln Asn
 565 570 575
 Asp Val Arg Pro Ile Arg Ser Ile Lys Asn Phe Leu Gln Ser Arg Leu
 580 585 590
 Leu Pro Arg Val
 595

<210> 469

<211> 569

<212> PRT

<213> Homo sapiens

<400> 469

Met Pro Ser Ser Leu Phe Ala Asp Leu Glu Arg Asn Gly Ser Gly Gly
 1 5 10 15
 Gly Gly Gly Gly Ser Ser Gly Gly Gly Glu Thr Leu Asp Asp Gln Arg
 20 25 30
 Ala Leu Gln Leu Ala Leu Asp Gln Leu Ser Leu Leu Gly Leu Asp Ser
 35 40 45
 Asp Glu Gly Ala Ser Leu Tyr Asp Ser Glu Pro Arg Lys Lys Ser Val
 50 55 60
 Asn Met Thr Glu Cys Val Pro Val Pro Ser Ser Glu His Val Ala Glu
 65 70 75 80

| | | | |
|---|-----|-----|-----|
| Ile Val Gly Arg Gln Gly Cys Lys Ile Lys Ala Leu Arg Ala Lys Thr | | | |
| | 85 | 90 | 95 |
| Asn Thr Tyr Ile Lys Thr Pro Val Arg Gly Glu Glu Pro Val Phe Val | | | |
| | 100 | 105 | 110 |
| Val Thr Gly Arg Lys Glu Asp Val Ala Met Ala Arg Arg Glu Ile Ile | | | |
| | 115 | 120 | 125 |
| Ser Ala Ala Glu His Phe Ser Met Ile Arg Ala Ser Arg Asn Lys Asn | | | |
| | 130 | 135 | 140 |
| Thr Ala Leu Asn Gly Ala Val Pro Gly Pro Pro Asn Leu Pro Gly Gln | | | |
| | 145 | 150 | 155 |
| Thr Thr Ile Gln Val Arg Val Pro Tyr Arg Val Val Gly Leu Val Val | | | |
| | 165 | 170 | 175 |
| Gly Pro Lys Gly Ala Thr Ile Lys Arg Ile Gln Gln Gln Thr His Thr | | | |
| | 180 | 185 | 190 |
| Tyr Ile Val Thr Pro Ser Arg Asp Lys Glu Pro Val Phe Glu Val Thr | | | |
| | 195 | 200 | 205 |
| Gly Met Pro Glu Asn Val Asp Arg Ala Arg Glu Glu Ile Glu Ala His | | | |
| | 210 | 215 | 220 |
| Ile Ala Leu Arg Thr Gly Gly Ile Ile Glu Leu Thr Asp Glu Asn Asp | | | |
| | 225 | 230 | 235 |
| Phe His Ala Asn Gly Thr Asp Val Gly Phe Asp Leu His His Gly Ser | | | |
| | 245 | 250 | 255 |
| Gly Gly Ser Gly Pro Gly Ser Leu Trp Ser Lys Pro Thr Pro Ser Ile | | | |
| | 260 | 265 | 270 |
| Thr Pro Thr Pro Gly Arg Lys Pro Phe Ser Ser Tyr Arg Asn Asp Ser | | | |
| | 275 | 280 | 285 |
| Ser Ser Ser Leu Gly Ser Ala Ser Thr Asp Ser Tyr Phe Gly Gly Gly | | | |
| | 290 | 295 | 300 |
| Thr Ser Ser Ser Ala Ala Ala Thr Gln Arg Leu Ala Asp Tyr Ser Pro | | | |

305 310 315 320
Pro Ser Pro Ala Leu Ser Phe Ala His Asn Gly Asn Asn Asn Asn Asn
 325 330 335
Gly Asn Gly Tyr Thr Tyr Thr Ala Gly Gly Glu Ala Ser Val Pro Ser
 340 345 350
Pro Asp Gly Cys Pro Glu Leu Gln Pro Thr Phe Asp Pro Ala Pro Ala
 355 360 365
Pro Pro Pro Gly Ala Pro Leu Ile Trp Ala Gln Phe Glu Arg Ser Pro
 370 375 380
Gly Gly Gly Pro Ala Ala Pro Val Ser Ser Ser Cys Ser Ser Ser Ala
385 390 395 400
Ser Ser Ser Ala Ser Ser Ser Ser Val Val Phe Pro Gly Gly Gly Ala
 405 410 415
Ser Ala Pro Ser Asn Ala Asn Leu Gly Leu Leu Val His Arg Arg Leu
 420 425 430
His Pro Gly Thr Ser Cys Pro Arg Leu Ser Pro Pro Leu His Met Ala
 435 440 445
Pro Gly Ala Gly Glu His His Leu Ala Arg Arg Val Arg Ser Asp Pro
 450 455 460
Gly Gly Gly Gly Leu Ala Tyr Ala Ala Tyr Ala Asn Gly Leu Gly Ala
465 470 475 480
Gln Leu Pro Gly Leu Gln Pro Ser Asp Thr Ser Gly Ser Ser Ser Ser
 485 490 495
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Gly Leu Arg Arg
 500 505 510
Lys Gly Ser Arg Asp Cys Ser Val Cys Phe Glu Ser Glu Val Ile Ala
 515 520 525
Ala Leu Val Pro Cys Gly His Asn Leu Phe Cys Met Glu Cys Ala Asn
 530 535 540

<210> 470

<211> 302

<212> PRT

<213> Homo sapiens

<400> 470

出証特 2 0 0 4 - 3 0 5 9 6 6 2

130 135 140
Pro Leu Ser Ala Ala Thr Gln Pro Gly Ser Val Gly Arg Leu His Phe
145 150 155 160
Pro Lys Leu Arg Ser Ser Ser Pro Phe Ser Gly His Ser Asp Glu Asn
165 170 175
Lys Ala Thr Gly Gln Gly Arg Glu Asn Arg Asp Gln Pro Gln Arg Pro
180 185 190
Ser His Leu Cys Glu Cys Pro Glu Ala Ala Lys Gln Ser Ala Thr Asn
195 200 205
Gly Val Ala Glu Thr Asn Arg Ser Val Phe Pro Leu Gly Ser Glu Ala
210 215 220
Arg Ser Leu Ser Leu Arg Arg Gln Glu Ser Gln Pro His Ser Gly Ser
225 230 235 240
Ser Arg Arg Glu Ser Val Ser Cys Ser Pro Ser Phe Trp Cys Cys Trp
245 250 255
Gln Pro Leu Ala Phe Leu Thr Cys Gly Cys Ala Ala Pro Ile Ser Val
260 265 270
Pro Gly Val Thr Arg Pro Ser Pro Arg Pro Cys Cys Val Ser Pro Pro
275 280 285
Leu Val Arg Leu Gln Ser Leu Gly Leu Gly Pro Thr Gln Ile
290 295 300

<210> 471

<211> 449

<212> PRT

<213> Homo sapiens

<400> 471

Met Pro Gly Met Met Glu Lys Gly Pro Glu Leu Leu Gly Lys Asn Arg
 1 5 10 15
 Ser Ala Asn Gly Ser Ala Lys Ser Pro Ala Gly Gly Gly Gly Ser Gly
 20 25 30
 Ala Ser Ser Thr Asn Gly Gly Leu His Tyr Ser Glu Pro Glu Ser Gly
 35 40 45
 Cys Ser Ser Asp Asp Glu His Asp Val Gly Met Arg Val Gly Ala Glu
 50 55 60
 Tyr Gln Ala Arg Ile Pro Glu Phe Asp Pro Gly Ala Thr Lys Tyr Thr
 65 70 75 80
 Asp Lys Asp Asn Gly Gly Met Leu Val Trp Ser Pro Tyr His Ser Ile
 85 90 95
 Pro Asp Ala Lys Leu Asp Glu Tyr Ile Ala Ile Ala Lys Glu Lys His
 100 105 110
 Gly Tyr Asn Val Glu Gln Ala Leu Gly Met Leu Phe Trp His Lys His
 115 120 125
 Asn Ile Glu Lys Ser Leu Ala Asp Leu Pro Asn Phe Thr Pro Phe Pro
 130 135 140
 Asp Glu Trp Thr Val Glu Asp Lys Val Leu Phe Glu Gln Ala Phe Ser
 145 150 155 160
 Phe His Gly Lys Ser Phe His Arg Ile Gln Gln Met Leu Pro Asp Lys
 165 170 175
 Thr Ile Ala Ser Leu Val Lys Tyr Tyr Tyr Ser Trp Lys Lys Thr Arg
 180 185 190
 Ser Arg Thr Ser Leu Met Asp Arg Gln Ala Arg Lys Leu Ala Asn Arg
 195 200 205
 His Asn Gln Gly Asp Ser Asp Asp Asp Val Glu Glu Thr His Pro Met
 210 215 220
 Asp Gly Asn Asp Ser Asp Tyr Asp Pro Lys Lys Glu Ala Lys Lys Glu

225 230 235 240
 Gly Asn Thr Glu Gln Pro Val Gln Thr Ser Lys Ile Gly Leu Gly Arg
 245 250 255
 Arg Glu Tyr Gln Ser Leu Gln His Arg His His Ser Gln Arg Ser Lys
 260 265 270
 Cys Arg Pro Pro Lys Gly Met Tyr Leu Thr Gln Glu Asp Val Val Ala
 275 280 285
 Val Ser Cys Ser Pro Asn Ala Ala Asn Thr Ile Leu Arg Gln Leu Asp
 290 295 300
 Met Glu Leu Ile Ser Leu Lys Arg Gln Val Gln Asn Ala Lys Gln Val
 305 310 315 320
 Asn Ser Ala Leu Lys Gln Lys Met Glu Gly Gly Ile Glu Glu Phe Lys
 325 330 335
 Pro Pro Glu Ser Asn Gln Lys Ile Asn Ala Arg Trp Thr Thr Glu Glu
 340 345 350
 Gln Leu Leu Ala Val Gln Gly Val Arg Lys Tyr Gly Lys Asp Phe Gln
 355 360 365
 Ala Ile Ala Asp Val Ile Gly Asn Lys Thr Val Gly Gln Val Lys Asn
 370 375 380
 Phe Phe Val Asn Tyr Arg Arg Arg Phe Asn Leu Glu Glu Val Leu Gln
 385 390 395 400
 Glu Trp Glu Ala Glu Gln Gly Thr Gln Ala Ser Asn Gly Asp Ala Ser
 405 410 415
 Thr Leu Gly Glu Glu Thr Lys Ser Ala Ser Asn Val Pro Ser Gly Lys
 420 425 430
 Ser Thr Asp Glu Glu Glu Glu Val Cys Leu Cys Met Glu Phe Glu Leu
 435 440 445
 Ile

<210> 472

<211> 244

<212> PRT

<213> Homo sapiens

<400> 472

Met Thr Gly Ser Asn Ser His Ile Thr Ile Leu Thr Val Asn Ile Asn

1 5 10 15

Gly Leu Asn Ala Pro Ile Lys Gly His Arg Leu Ala Asn Trp Ile Lys

20 25 30

Ser Gln Asp Pro Ser Val Cys Cys Ile Gln Glu Thr His Leu Met Arg

35 40 45

Lys Phe Thr His Arg Phe Asn Ile Lys Gly Trp Arg Lys Ile Tyr Gln

50 55 60

Glu Asn Gly Lys Gln Lys Lys Ala Gly Val Ala Ile Leu Val Ser Asp

65 70 75 80

Lys Thr Asp Phe Lys Pro Thr Lys Ile Lys Gly Asp Lys Gly His Tyr

85 90 95

Ile Met Val Lys Gly Ser Met Gln Gln Glu Glu Leu Thr Ile Leu Asn

100 105 110

Ile Tyr Ala Pro Asn Thr Arg Ala Pro Arg Phe Ile Lys Gln Val Leu

115 120 125

Arg Asp Leu Gln Arg Asp Leu Asp Ser His Thr Ile Ile Met Gly Asp

130 135 140

Phe Asn Thr Glu Leu Ser Ile Leu Glu Arg Ser Thr Arg Gln Lys Val

145 150 155 160

Asn Lys Asp Ile Gln Asp Leu Asn Ser Ala Leu Gln Gln Thr Asp Pro

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 165 | | 170 | | 175 | | | | | | | | | | |
| Ile | Asp | Ile | His | Arg | Asn | Leu | His | Leu | Lys | Ser | Thr | Glu | Tyr | Thr | Leu |
| | 180 | | | | 185 | | | | | | | | 190 | | |
| Phe | Ser | Ala | Pro | His | Ile | Thr | Tyr | Ser | Lys | Phe | Asp | His | Ile | Ile | Gly |
| | 195 | | | | | 200 | | | | | | | 205 | | |
| Ser | Lys | Ala | Leu | Leu | Thr | Lys | Cys | Lys | Arg | Thr | Glu | Ile | Thr | Thr | Asn |
| | 210 | | | | | 215 | | | | | | | 220 | | |
| Cys | Leu | Leu | Asp | His | Ser | Ala | Ile | Lys | Phe | Glu | Leu | Arg | Ile | Lys | Lys |
| | 225 | | | | | 230 | | | | | | 235 | | | 240 |
| Leu | Thr | Gln | Asn | | | | | | | | | | | | |

<210> 473

<211> 695

<212> PRT

<213> Homo sapiens

<400> 473

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Tyr | Pro | Tyr | Pro | Gly | Ala | Arg | Ala | Glu | Glu | Lys | Leu | Gly | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Thr | Arg | Asp | Pro | Thr | Tyr | Gln | Glu | Arg | Ala | Ala | Pro | Gln | Thr | Gln | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Gly | Lys | Glu | Thr | Asp | Ser | Leu | Ser | Ala | Gly | Phe | Val | Val | Val | Met |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Val | Asp | Leu | Ser | Arg | Cys | Gly | Pro | Asp | His | Thr | Ala | Ser | Arg | Cys |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Pro | Trp | Asp | Pro | Gly | Leu | Leu | Leu | Arg | Phe | Leu | Ala | Ala | Met | Ala | Ala |
| | | 65 | | | | 70 | | | | | 75 | | | | 80 |

Val Gly Ala Leu Glu Pro Leu Leu Pro Gly Pro Leu Leu Ala Val His
85 90 95
Pro His Ala Gly Thr Ala Pro Pro Ala Asn Gln Leu Pro Trp Pro Val
100 105 110
Leu Cys Ser Pro Val Ala Gly Val Ile Leu Leu Ala Leu Gly Ala Leu
115 120 125
Leu Val Leu Gln Leu Ile Arg Arg Arg Arg Arg Glu His Gly Ala Leu
130 135 140
Trp Leu Pro Pro Gly Phe Thr Arg Arg Pro Arg Thr Gln Ser Ala Pro
145 150 155 160
His Arg Arg Arg Pro Pro Leu Gly Glu Asp Ser Ile Gly Leu Lys Ala
165 170 175
Leu Lys Pro Lys Ala Glu Val Asp Glu Asp Gly Val Val Met Cys Ser
180 185 190
Gly Pro Glu Glu Gly Glu Glu Ala Glu Glu Thr Gly Pro Pro Ser Thr
195 200 205
Cys Gln Leu Trp Ser Leu Ser Gly Gly Cys Gly Ala Leu Pro Gln Ala
210 215 220
Ala Met Leu Thr Pro Pro Gln Glu Ser Glu Met Glu Ala Pro Asp Leu
225 230 235 240
Asp Thr Arg Gly Pro Asp Gly Val Thr Pro Leu Met Ser Ala Val Cys
245 250 255
Cys Gly Glu Val Gln Ser Gly Thr Phe Gln Gly Ala Trp Leu Gly Cys
260 265 270
Pro Glu Pro Trp Glu Pro Leu Leu Asp Gly Gly Ala Cys Pro Gln Ala
275 280 285
His Thr Val Gly Thr Gly Glu Thr Pro Leu His Leu Ala Ala Arg Phe
290 295 300
Ser Arg Pro Thr Ala Ala Arg Arg Leu Leu Glu Ala Gly Ala Asn Pro

305 310 315 320
Asn Gln Pro Asp Arg Ala Gly Arg Thr Pro Leu His Ala Ala Val Ala
 325 330 335
Ala Asp Ala Arg Glu Val Cys Gln Leu Leu Leu Arg Ser Arg Gln Thr
 340 345 350
Ala Val Asp Ala Arg Thr Glu Asp Gly Thr Thr Pro Leu Met Leu Ala
 355 360 365
Ala Arg Leu Ala Val Glu Asp Leu Val Glu Glu Leu Ile Ala Ala Gln
 370 375 380
Ala Asp Val Gly Ala Arg Asp Lys Trp Gly Lys Thr Ala Leu His Trp
385 390 395 400
Ala Ala Ala Val Asn Asn Ala Arg Ala Ala Arg Ser Leu Leu Gln Ala
 405 410 415
Gly Ala Asp Lys Asp Ala Gln Asp Asn Arg Glu Gln Thr Pro Leu Phe
 420 425 430
Leu Ala Ala Arg Glu Gly Ala Val Glu Val Ala Gln Leu Leu Leu Gly
 435 440 445
Leu Gly Ala Ala Arg Glu Leu Arg Asp Gln Ala Gly Leu Ala Pro Ala
 450 455 460
Asp Val Ala His Gln Arg Asn His Trp Asp Leu Leu Thr Leu Leu Glu
465 470 475 480
Gly Ala Gly Pro Pro Glu Ala Arg His Lys Ala Thr Pro Gly Arg Glu
 485 490 495
Ala Gly Pro Phe Pro Arg Ala Arg Thr Val Ser Val Ser Val Pro Pro
 500 505 510
His Gly Gly Gly Ala Leu Pro Arg Cys Arg Thr Leu Ser Ala Gly Ala
 515 520 525
Gly Pro Arg Gly Gly Gly Ala Cys Leu Gln Ala Arg Thr Trp Ser Val
 530 535 540

Asp Leu Ala Ala Arg Gly Gly Gly Ala Tyr Ser His Cys Arg Ser Leu
 545 550 555 560
 Ser Gly Val Gly Ala Gly Gly Gly Pro Thr Pro Arg Gly Arg Arg Phe
 565 570 575
 Ser Ala Gly Met Arg Gly Pro Arg Pro Asn Pro Ala Ile Met Arg Gly
 580 585 590
 Arg Tyr Gly Val Ala Ala Gly Arg Gly Gly Arg Val Ser Thr Asp Asp
 595 600 605
 Trp Pro Cys Asp Trp Val Ala Leu Gly Ala Cys Gly Ser Ala Ser Asn
 610 615 620
 Ile Pro Ile Pro Pro Pro Cys Leu Thr Pro Ser Pro Glu Arg Gly Ser
 625 630 635 640
 Pro Gln Leu Asp Cys Gly Pro Pro Ala Leu Gln Glu Met Pro Ile Asn
 645 650 655
 Gln Gly Gly Glu Gly Lys Lys Ile Glu Glu Tyr Met Val Gly Arg Asn
 660 665 670
 Ser Lys Asn Asp Tyr Pro Leu Lys Gly Arg Leu Glu Gly Leu Pro Gly
 675 680 685
 Phe Lys Met Asp Pro Pro Lys
 690 695

<210> 474

<211> 211

<212> PRT

<213> Homo sapiens

<400> 474

Met Ser Ser Val Val Gly Leu Phe Leu Cys Phe Thr Ser Cys Ser Ser

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| His Phe Ser Leu Tyr Leu Pro Lys Ser Trp Thr Ile Gln Val Gly Leu | | | |
| 20 | 25 | 30 | |
| Val Ser Leu Leu Asp Asn Pro Ala Pro Ser His Leu Val Glu Lys Ile | | | |
| 35 | 40 | 45 | |
| Val Tyr His Ser Lys Tyr Lys Pro Lys Arg Leu Gly Asn Asp Ile Ala | | | |
| 50 | 55 | 60 | |
| Leu Met Lys Leu Ala Gly Pro Leu Thr Phe Asn Glu Met Ile Gln Pro | | | |
| 65 | 70 | 75 | 80 |
| Val Cys Leu Pro Asn Ser Glu Glu Asn Phe Pro Asp Gly Lys Val Cys | | | |
| 85 | 90 | 95 | |
| Trp Thr Ser Gly Trp Gly Ala Thr Glu Asp Gly Gly Asp Ala Ser Pro | | | |
| 100 | 105 | 110 | |
| Val Leu Asn His Ala Ala Val Pro Leu Ile Ser Asn Lys Ile Cys Asn | | | |
| 115 | 120 | 125 | |
| His Arg Asp Val Tyr Gly Gly Ile Ile Ser Pro Ser Met Leu Cys Ala | | | |
| 130 | 135 | 140 | |
| Gly Tyr Leu Thr Gly Gly Val Asp Ser Cys Gln Gly Asp Ser Gly Gly | | | |
| 145 | 150 | 155 | 160 |
| Pro Leu Val Cys Gln Glu Arg Arg Leu Trp Lys Leu Val Gly Ala Thr | | | |
| 165 | 170 | 175 | |
| Ser Phe Gly Ile Gly Cys Ala Glu Val Asn Lys Pro Gly Val Tyr Thr | | | |
| 180 | 185 | 190 | |
| Arg Val Thr Ser Phe Leu Asp Trp Ile His Glu Gln Met Glu Arg Asp | | | |
| 195 | 200 | 205 | |
| Leu Lys Thr | | | |
| 210 | | | |

<210> 475

<211> 193

<212> PRT

<213> Homo sapiens

<400> 475

Met His Ala Leu Lys Met Thr Trp His Val His Cys Phe Thr Cys Ala

1 5 10 15

Ala Cys Lys Thr Pro Ile Arg Asn Arg Ala Phe Tyr Met Glu Glu Gly

20 25 30

Val Pro Tyr Cys Glu Arg Gly Thr His Trp Pro Val Arg Val Arg Arg

35 40 45

Asp Gly Ala Trp Gly Arg His Glu Ser Arg Ser Ser Phe Ser Leu Pro

50 55 60

Pro Phe Ser Asp Tyr Glu Lys Met Phe Gly Thr Lys Cys His Gly Cys

65 70 75 80

Asp Phe Lys Ile Asp Ala Gly Asp Arg Phe Leu Glu Ala Leu Gly Phe

85 90 95

Ser Trp His Asp Thr Cys Phe Val Cys Ala Val Arg Ala Pro Pro Leu

100 105 110

Glu Leu Ser Pro Lys Pro Thr Gly Pro Leu Phe Ile Pro Gln Glu Met

115 120 125

Gln Glu Lys Leu Gly Arg Gly Leu Ser Cys Cys Pro Gln Pro His Val

130 135 140

Thr Gly Pro Leu Leu Ser Leu Asp Met Ser Asp Gln Pro Gly Arg Lys

145 150 155 160

Asp Leu Leu Leu Gln Glu Gly Gln Ala Ser Leu Gln Glu Pro Cys Leu

165 170 175

Leu Ser Cys Val Ser Pro Phe Cys Pro Gln Leu Pro Arg Trp Pro Leu

180

185

190

Ala

<210> 476

<211> 134

<212> PRT

<213> Homo sapiens

<400> 476

Met Cys Gln Val Tyr Phe Val Lys Leu Leu Ile Leu Gly Val Leu Leu

1

5

10

15

Cys Phe Leu Leu Val Arg Gln Asp Leu Thr Leu Ser Pro Arg Leu Glu

20

25

30

Cys Ser Gly Ala Ile Trp Ala His Cys Asn Pro Arg Leu Leu Gly Ile

35

40

45

Ser Asn Leu Pro Ala Leu Ala Ser Gln Val Ala Glu Thr Thr Gly Met

50

55

60

Ser His His Thr Gln Leu Thr Thr Cys Asn Phe Phe Asp Arg Asp Arg

65

70

75

80

Ser Cys His Val Thr Gln Thr Asp Leu Lys Thr Pro Gly Leu Arg Arg

85

90

95

Pro Thr His Leu Gly Leu Pro Lys Cys Trp Asp Tyr Arg Cys Glu Pro

100

105

110

Leu His Leu Thr Gln Phe Val Ile Leu Asn Leu Phe Leu Leu Ser Cys

115

120

125

Phe Ser Phe Phe Phe Leu

130

<210> 477

<211> 568

<212> PRT

<213> Homo sapiens

<400> 477

Met Gly Ser Glu Val Val Ala Gly Asn Ser Val Gly Pro Thr Met Gly

1 5 10 15

Ala Ala Ser Ser Gly Pro Leu Pro Pro Pro Pro Pro Pro Leu Pro Pro

20 25 30

Ser Ser Asp Thr Pro Glu Thr Val Gln Asn Gly Pro Val Thr Pro Pro

35 40 45

Met Pro Pro Pro Pro Pro Leu Pro Gly Pro Ala Ala Glu Thr Val Pro

50 55 60

Ala Pro Pro Leu Ala Pro Pro Leu Pro Ser Ala Pro Pro Leu Pro Gly

65 70 75 80

Thr Ser Ser Pro Thr Val Val Phe Asn Ser Gly Leu Ala Ala Val Lys

85 90 95

Ile Lys Lys Pro Ile Lys Thr Lys Phe Arg Met Pro Val Phe Asn Trp

100 105 110

Val Ala Leu Lys Pro Asn Gln Ile Asn Gly Thr Val Phe Asn Glu Ile

115 120 125

Asp Asp Glu Arg Ile Leu Glu Asp Leu Asn Val Asp Glu Phe Glu Glu

130 135 140

Ile Phe Lys Thr Lys Ala Gln Gly Pro Ala Ile Asp Leu Ser Ser Ser

145 150 155 160

Lys Gln Lys Ile Pro Gln Lys Gly Ser Asn Lys Val Thr Leu Leu Glu

| | | |
|---|-----|-----|
| 165 | 170 | 175 |
| Ala Asn Arg Ala Lys Asn Leu Ala Ile Thr Leu Arg Lys Ala Gly Lys | | |
| 180 | 185 | 190 |
| Thr Ala Asp Glu Ile Cys Lys Ala Ile His Val Phe Asp Leu Lys Thr | | |
| 195 | 200 | 205 |
| Leu Pro Val Asp Phe Val Glu Cys Leu Met Arg Phe Leu Pro Thr Glu | | |
| 210 | 215 | 220 |
| Asn Glu Val Lys Val Leu Arg Leu Tyr Glu Arg Glu Arg Lys Pro Leu | | |
| 225 | 230 | 235 |
| Glu Asn Leu Ser Asp Glu Asp Arg Phe Met Met Gln Phe Ser Lys Ile | | |
| 245 | 250 | 255 |
| Glu Arg Leu Met Gln Lys Met Thr Ile Met Ala Phe Ile Gly Asn Phe | | |
| 260 | 265 | 270 |
| Ala Glu Ser Ile Gln Met Leu Thr Pro Gln Leu His Ala Ile Ile Ala | | |
| 275 | 280 | 285 |
| Ala Ser Val Ser Ile Lys Ser Ser Gln Lys Leu Lys Lys Ile Leu Glu | | |
| 290 | 295 | 300 |
| Ile Ile Leu Ala Leu Gly Asn Tyr Met Asn Ser Ser Lys Arg Gly Ala | | |
| 305 | 310 | 315 |
| Val Tyr Gly Phe Lys Leu Gln Ser Leu Asp Leu Leu Leu Asp Thr Lys | | |
| 325 | 330 | 335 |
| Ser Thr Asp Arg Lys Gln Thr Leu Leu His Tyr Ile Ser Asn Val Val | | |
| 340 | 345 | 350 |
| Lys Glu Lys Tyr His Gln Val Ser Leu Phe Tyr Asn Glu Leu His Tyr | | |
| 355 | 360 | 365 |
| Val Glu Lys Ala Ala Ala Val Ser Leu Glu Asn Val Leu Leu Asp Val | | |
| 370 | 375 | 380 |
| Lys Glu Leu Gln Arg Gly Met Asp Leu Thr Lys Arg Glu Tyr Thr Met | | |
| 385 | 390 | 395 |
| | | 400 |

His Asp His Asn Thr Leu Leu Lys Glu Phe Ile Leu Asn Asn Glu Gly
405 410 415
Lys Leu Lys Lys Leu Gln Asp Asp Ala Lys Ile Ala Gln Asp Ala Phe
420 425 430
Asp Asp Val Val Lys Tyr Phe Gly Glu Asn Pro Lys Thr Thr Pro Pro
435 440 445
Ser Val Phe Phe Pro Val Phe Val Arg Phe Val Lys Ala Tyr Lys Gln
450 455 460
Ala Glu Glu Glu Asn Glu Leu Arg Lys Lys Gln Glu Gln Ala Leu Met
465 470 475 480
Glu Lys Leu Leu Glu Gln Glu Ala Leu Met Glu Gln Gln Asp Pro Lys
485 490 495
Ser Pro Ser His Lys Ser Lys Arg Gln Gln Gln Glu Leu Ile Ala Glu
500 505 510
Leu Arg Arg Arg Gln Val Lys Asp Asn Arg His Val Tyr Glu Gly Lys
515 520 525
Asp Gly Ala Ile Glu Asp Ile Ile Thr Ala Leu Lys Lys Asn Asn Ile
530 535 540
Thr Lys Phe Pro Asn Val His Ser Arg Val Arg Ile Ser Ser Ser Thr
545 550 555 560
Pro Val Val Glu Asp Thr Gln Ser
565

<210> 478

<211> 415

<212> PRT

<213> Homo sapiens

<400> 478

Met Thr Leu Ala Ala Ser Ser Gln Arg Ser Gln Ile Ile Arg Ser Lys
1 5 10 15
Phe Arg Ser Val Leu Gln Leu Arg Ile His Arg Arg Asn Gln Glu Gln
20 25 30
Ile Ser Asp Pro Asp Pro Trp Ile Ser Ala Ser Asp Pro Pro Leu Ala
35 40 45
Pro Ala Leu Pro Ser Gly Thr Ala Pro Phe Leu Phe Ser Pro Gly Val
50 55 60
Leu Leu Pro Glu Pro Glu Tyr Cys Pro Pro Trp Arg Ser Pro Lys Lys
65 70 75 80
Glu Ser Pro Lys Ile Ser Gln Arg Trp Arg Glu Ser Lys Pro Arg Gly
85 90 95
Asn Leu Thr Tyr His Gln Tyr Met Pro Pro Glu Pro Arg Gln Gly Ser
100 105 110
Arg Ala Asp Pro Gln Ala Glu Gly Ser Ala Leu Gly Pro Pro Gly Pro
115 120 125
Ser Leu Trp Glu Gly Thr Asp Ser Gln Gln Pro His Pro Arg Met Lys
130 135 140
Pro Ser Pro Leu Thr Pro Cys Pro Pro Gly Val Pro Ser Pro Ser Pro
145 150 155 160
Pro Pro His Lys Leu Glu Leu Gln Thr Leu Lys Leu Glu Glu Leu Thr
165 170 175
Val Ser Glu Leu Arg Gln Gln Leu Arg Leu Arg Gly Leu Pro Val Ser
180 185 190
Gly Thr Lys Ser Met Leu Leu Glu Arg Met Arg Gly Gly Ala Pro Pro
195 200 205
Arg Glu Arg Pro Lys Pro Arg Arg Glu Asp Ser Pro Ala Gly Ala Pro
210 215 220

Trp Pro Arg Leu Lys Pro Lys Ala Leu Ala Ala Arg Arg Gln Gly
225 230 235 240
Ser Val Lys Pro Ser Ala Ala Ser His Arg Pro Pro Leu Pro Arg Ala
245 250 255
Ala Asp Thr Pro Gly Thr Ala Pro Ala Pro Thr Pro Thr Pro Ala Pro
260 265 270
Ala Ala Ala Pro Ala Leu Thr Pro Ser Ser Gly Pro Gly Ser Ala Ala
275 280 285
Leu Thr Leu Glu Glu Glu Leu Gln Glu Ala Ile Arg Arg Ala Gln Leu
290 295 300
Leu Pro Asn Arg Gly Ile Asp Asp Ile Leu Glu Asp Gln Val Glu Pro
305 310 315 320
Asp Asp Pro Leu Pro Pro Ile Pro Leu Asp Phe Pro Gly Ser Phe Asp
325 330 335
Val Leu Ser Pro Ser Pro Asp Ser Glu Gly Leu Ser Ser Val Phe Ser
340 345 350
Ser Ser Leu Pro Ser Pro Thr Asn Ser Ser Ser Pro Ser Pro Arg Asp
355 360 365
Pro Thr Asp Ser Leu Asp Trp Leu Glu Ala Leu Ser Gly Gly Pro Pro
370 375 380
Leu Gly Ser Gly Pro Pro Pro Pro Ser Ile Phe Ser Ala Asp Leu Ser
385 390 395 400
Asp Ser Ser Ser Ser Arg Leu Trp Asp Leu Leu Glu Asp Pro Trp
405 410 415

<210> 479

<211> 197

<212> PRT

<213> Homo sapiens

<400> 479

Met Ser Cys Tyr Pro Thr Phe Asp Trp Ala Thr Trp Ala Glu Gly Glu
1 5 10 15
Lys Gly Val Trp Lys Ser Pro Pro Ser Ile Gln Thr Gly Asp Gln Ile
20 25 30
Gly Val Arg Glu Glu Leu Leu Asn Ala Leu His Ser Ser Leu Ala Arg
35 40 45
Pro Ala Ile Lys Lys His Gln His Pro Lys Gly Lys Lys Lys Arg Arg
50 55 60
Ser Arg Glu Lys His Gln Glu Ser Thr Thr Asp Pro Gly Ser Pro Lys
65 70 75 80
Lys Cys Arg Ala Arg Phe Gly Leu Asn Gln Gln Thr Asp Trp Cys Gly
85 90 95
Pro Cys Arg Arg Lys Lys Lys Cys Ile Arg Tyr Leu Pro Gly Glu Gly
100 105 110
Arg Cys Pro Ser Pro Val Pro Ser Asp Asp Ser Ala Leu Gly Cys Pro
115 120 125
Gly Ser Pro Ala Pro Gln Asp Ser Pro Ser Tyr His Leu Leu Pro Arg
130 135 140
Phe Pro Thr Glu Leu Leu Thr Ser Pro Ala Glu Pro Ala Pro Thr Ser
145 150 155 160
Pro Gly Leu Ser Thr Ala Leu Ser Leu Pro Thr Pro Gly Pro Pro Gln
165 170 175
Ala Pro Arg Ser Thr Leu Gln Ser Thr Gln Val Gln Gln Gln Glu Ser
180 185 190
Gln Arg Gln Val Ala
195

<210> 480

<211> 209

<212> PRT

<213> Homo sapiens

<400> 480

Met Lys Lys Leu Thr Pro Lys Gln Lys Phe Ser Glu Asp Leu Glu Ser

1 5 10 15

Tyr Lys Ile Ser Val Val Met Gln Glu Ser Ala Glu Lys Leu Ser Glu

20 25 30

Lys Leu His Lys Cys Lys Glu Phe Val Asp Ser Cys Arg Leu Thr Phe

35 40 45

Pro Thr Ser Gly Asp Glu Tyr Ser Arg Gly Phe Leu Gln Asn Leu Asn

50 55 60

Leu Ile Gln Asp Gln Asn Ala Gln Thr Arg Trp Lys Gln Gly Arg Tyr

65 70 75 80

Asp Glu Asp Gly Lys Pro Phe Asn Gln Arg Ser Leu Leu Leu Gly His

85 90 95

Glu Arg Ile Leu Thr Arg Ala Lys Ser Tyr Glu Cys Ser Glu Cys Gly

100 105 110

Lys Val Ile Arg Arg Lys Ala Trp Phe Asp Gln His Gln Arg Ile His

115 120 125

Phe Leu Glu Asn Pro Phe Glu Cys Lys Val Cys Gly Gln Ala Phe Arg

130 135 140

Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys

145 150 155 160

Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg Gln Leu Ala Phe

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| | 165 | | 170 | | 175 |
| Leu | Leu | Asn | Ile | Arg | Gly |
| | | | | | Phe |
| | | | | | Thr |
| | | | | | Pro |
| | | | | | Lys |
| | | | | | Lys |
| | | | | | Asn |
| | | | | | Leu |
| | | | | | Ile |
| | | | | | Asn |
| | | | | | Val |
| | 180 | | 185 | | 190 |
| Ala | Asn | Val | Lys | Lys | Arg |
| | | | | | Leu |
| | | | | | Val |
| | | | | | Arg |
| | | | | | Ile |
| | | | | | Gln |
| | | | | | Pro |
| | | | | | Leu |
| | | | | | Phe |
| | | | | | Asp |
| | | | | | Ile |
| | 195 | | 200 | | 205 |
| Arg | | | | | |

<210> 481

<211> 259

<212> PRT

<213> Homo sapiens

<400> 481

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Cys | His | Leu | Lys | Thr | His | Tyr | Lys | Met | Glu | Tyr | Lys | Cys | Arg |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ile | Cys | Gln | Thr | Val | Lys | Ala | Asn | Gln | Leu | Glu | Leu | Glu | Thr | Arg | Thr |
| | | | | 20 | | | | 25 | | | | | | 30 | |
| Arg | Glu | His | Arg | Leu | Gly | Asn | His | Tyr | Lys | Cys | Asp | Gln | Cys | Gly | Tyr |
| | | | | 35 | | | | 40 | | | | | | 45 | |
| Leu | Ser | Lys | Thr | Ala | Asn | Lys | Leu | Ile | Glu | His | Val | Arg | Val | His | Thr |
| | | | | 50 | | | | 55 | | | | | | 60 | |
| Gly | Glu | Arg | Pro | Phe | His | Cys | Asp | Gln | Cys | Ser | Tyr | Ser | Cys | Lys | Arg |
| | | | | 65 | | | | 70 | | | | | | 75 | |
| Lys | Asp | Asn | Leu | Asn | Leu | His | Lys | Lys | Leu | Lys | His | Ala | Pro | Arg | Gln |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Thr | Phe | Ser | Cys | Glu | Glu | Cys | Leu | Phe | Lys | Thr | Thr | His | Pro | Phe | Val |
| | | | | 100 | | | | 105 | | | | | | 110 | |

Phe Ser Arg His Val Lys Lys His Gln Ser Gly Asp Cys Pro Glu Glu
 115 120 125
 Asp Lys Lys Gly Leu Cys Pro Ala Pro Lys Glu Pro Ala Gly Pro Gly
 130 135 140
 Ala Pro Leu Leu Val Val Gly Ser Ser Arg Asn Leu Leu Ser Pro Leu
 145 150 155 160
 Ser Val Met Ser Ala Ser Gln Ala Leu Gln Thr Val Ala Leu Ser Ala
 165 170 175
 Ala His Gly Ser Ser Ser Glu Pro Asn Leu Ala Leu Lys Ala Leu Ala
 180 185 190
 Phe Asn Gly Ser Pro Leu Arg Phe Asp Lys Tyr Arg Asn Ser Asp Phe
 195 200 205
 Ala His Leu Ile Pro Leu Thr Met Leu Tyr Pro Lys Asn His Leu Asp
 210 215 220
 Leu Thr Phe His Pro Pro Arg Pro Gln Thr Ala Pro Pro Ser Ile Pro
 225 230 235 240
 Ser Pro Lys His Pro Phe Leu Ala Tyr Leu Gly Leu Arg Glu Arg Ala
 245 250 255
 Glu Thr Val

<210> 482

<211> 160

<212> PRT

<213> Homo sapiens

<400> 482

Met Ile Ser Ala Tyr Cys Asn Leu His Leu Leu Gly Ser Ser Asn Ser

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 5 | 10 | 15 | | | | | | | | | | | | |
| Ser | Ala | Ser | Ala | Ser | Gln | Val | Ala | Gly | Ile | Thr | Gly | Ala | Cys | Gln | His |
| | 20 | | 25 | | 30 | | | | | | | | | | |
| Ala | Trp | Leu | Ile | Trp | Gly | Tyr | Ser | Ser | Phe | Leu | Arg | Gln | Ser | Phe | Ala |
| | 35 | | 40 | | 45 | | | | | | | | | | |
| Leu | Ser | Pro | Lys | Leu | Glu | Cys | Ser | Gly | Thr | Ile | Ser | Ala | Leu | Cys | Ser |
| | 50 | | 55 | | 60 | | | | | | | | | | |
| Leu | Cys | Leu | Leu | Gly | Ser | Ser | Asp | Ser | Pro | Ser | Ser | Ala | Ser | Gln | Val |
| | 65 | | 70 | | 75 | | | | | | | | | 80 | |
| Ala | Gly | Ile | Thr | Gly | Ala | Cys | Tyr | His | Ala | Gln | Leu | Ile | Phe | Val | Phe |
| | | 85 | | | | | | 90 | | | | | 95 | | |
| Leu | Val | Gln | Met | Arg | Phe | His | His | Leu | Gly | Gln | Ala | Gly | Leu | Glu | Leu |
| | 100 | | | | | | | 105 | | | | | 110 | | |
| Leu | Thr | Ser | Ser | Asp | Leu | Pro | Ala | Ser | Ala | Ser | Gln | Ser | Ala | Gly | Ile |
| | 115 | | | | | | | 120 | | | | | 125 | | |
| Thr | Asp | Val | Asn | His | His | Ala | Gln | Pro | Leu | Trp | Gly | Tyr | Ser | Cys | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Tyr | Phe | Ser | Phe | Ile | Val | Leu | Tyr | Lys | Lys | Val | Val | Leu | Leu | Tyr | Leu |
| | 145 | | | 150 | | | | | 155 | | | | | 160 | |

<210> 483

<211> 276

<212> PRT

<213> Homo sapiens

<400> 483

Met Asn Val Gln Ser Ser Arg Ser His Ala Ile Phe Thr Ile His Leu

1

5

10

15

Cys Gln Met Arg Met Cys Thr Gln Pro Asp Leu Val Asn Glu Ala Val
 20 25 30
 Thr Gly Leu Pro Asp Gly Thr Pro Pro Ser Ser Glu Tyr Glu Thr Leu
 35 40 45
 Thr Ala Lys Phe His Phe Val Asp Leu Ala Gly Ser Glu Arg Leu Lys
 50 55 60
 Arg Thr Gly Ala Thr Gly Glu Arg Ala Lys Glu Gly Ile Ser Ile Asn
 65 70 75 80
 Cys Gly Leu Val Gly Thr Trp Trp Val Ile Ser Pro Ser Thr His Thr
 85 90 95
 Ala Gln Ser Gln Thr Pro Pro Arg Pro Cys Ser Pro Thr Pro Ala Glu
 100 105 110
 Ser Ser Leu Asp Ile Leu Pro Ile Ser Pro Ser Leu Ser Gly Val Thr
 115 120 125
 Pro Val Pro Ser Phe Pro Ile Ser Pro Thr Tyr Pro Cys Ala Tyr Lys
 130 135 140
 Pro Thr Gln Gly Ala Arg Gly Leu Leu Gly Pro Lys Arg Gln Leu Ala
 145 150 155 160
 Leu Gly Asn Val Ile Ser Ala Leu Gly Asp Gln Ser Lys Lys Val Val
 165 170 175
 His Val Ser Tyr Arg Asp Ser Lys Leu Thr Arg Leu Leu Gln Asp Ser
 180 185 190
 Leu Gly Gly Asn Ser Gln Thr Ile Met Ile Ala Cys Val Ser Pro Ser
 195 200 205
 Asp Arg Asp Phe Met Glu Thr Leu Asn Thr Leu Lys Tyr Ala Asn Arg
 210 215 220
 Ala Arg Asn Ile Lys Asn Lys Val Val Val Asn Gln Asp Lys Thr Ser
 225 230 235 240
 Gln Gln Ile Ser Ala Leu Arg Ala Glu Ile Ala Arg Leu Gln Met Glu

245 250 255
Leu Met Glu Tyr Lys Ala Val Ser Met Leu Leu Gly Ile Ala Gln His
260 265 270
Ser Pro Trp Ser
275

<210> 484

<211> 159

<212> PRT

<213> Homo sapiens

<400> 484

Met Gln Gly Ala Glu Leu His Pro Arg Cys His Ala Trp Val Ser Val
1 5 10 15
Phe Ala Leu Gly Leu Thr Leu Lys Arg Thr Gly Gln Pro Gln Ala Pro
20 25 30
Ser Thr Gly Asp Leu Pro Ser Gly Pro Ala Gly Lys Ala Gly Ser Arg
35 40 45
Glu Leu Arg Gly Glu Pro Pro Thr Trp Val Trp His Pro Pro Ile Ser
50 55 60
Asp Asn Phe His Gln Glu Asp Ser Lys Arg Pro His Val Cys Phe Asp
65 70 75 80
Gly Glu Asp Pro Glu Val Asp Gly Phe Arg Gly Cys Pro Leu Asp Gly
85 90 95
Glu Leu Gly Pro Cys Gly Lys Ser His Ala Ser Phe Gly Arg Pro Arg
100 105 110
Pro Val Ala Pro Thr Leu His Pro His Pro Tyr Pro Cys Ser Cys Cys
115 120 125

Pro Ser Ile Lys Pro Pro Leu Arg Gly Leu Thr Gly Arg Gly Gly Gln

130

135

140

Ala Trp Arg Gly Ser His Tyr Arg Thr Pro Gly His Met Thr Arg

145

150

155

<210> 485

<211> 781

<212> PRT

<213> Homo sapiens

<400> 485

Met Lys Ser Ser Gly Pro Val Glu Arg Leu Leu Arg Ala Leu Gly Arg

1

5

10

15

Arg Asp Ser Ser Arg Ala Ala Ser Arg Pro Arg Lys Ala Glu Pro His

20

25

30

Ser Phe Arg Glu Lys Val Phe Arg Lys Lys Pro Pro Val Cys Ala Val

35

40

45

Cys Lys Val Thr Ile Asp Gly Thr Gly Val Ser Cys Arg Val Cys Lys

50

55

60

Val Ala Thr His Arg Lys Cys Glu Ala Lys Val Thr Ser Ala Cys Gln

65

70

75

80

Ala Leu Pro Pro Val Glu Leu Arg Arg Asn Thr Ala Pro Val Arg Arg

85

90

95

Ile Glu His Leu Gly Ser Thr Lys Ser Leu Asn His Ser Lys Gln Arg

100

105

110

Ser Thr Leu Pro Arg Ser Phe Ser Leu Asp Pro Leu Met Glu Arg Arg

115

120

125

Trp Asp Leu Asp Leu Thr Tyr Val Thr Glu Arg Ile Leu Ala Ala Ala

130 135 140
Phe Pro Ala Arg Pro Asp Glu Gln Arg His Arg Gly His Leu Arg Glu
145 150 155 160
Leu Ala His Val Leu Gln Ser Lys His Arg Asp Lys Tyr Leu Leu Phe
165 170 175
Asn Leu Ser Glu Lys Arg His Asp Leu Thr Arg Leu Asn Pro Lys Val
180 185 190
Gln Asp Phe Gly Trp Pro Glu Leu His Ala Pro Pro Leu Asp Lys Leu
195 200 205
Cys Ser Ile Cys Lys Ala Met Glu Thr Trp Leu Ser Ala Asp Pro Gln
210 215 220
His Val Val Val Leu Tyr Cys Lys Gly Asn Lys Gly Lys Leu Gly Val
225 230 235 240
Ile Val Ser Ala Tyr Met His Tyr Ser Lys Ile Ser Ala Gly Ala Asp
245 250 255
Gln Ala Leu Ala Thr Leu Thr Met Arg Lys Phe Cys Glu Asp Lys Val
260 265 270
Ala Thr Glu Leu Gln Pro Ser Gln Arg Arg Tyr Ile Ser Tyr Phe Ser
275 280 285
Gly Leu Leu Ser Gly Ser Ile Arg Met Asn Ser Ser Pro Leu Phe Leu
290 295 300
His Tyr Val Leu Ile Pro Met Leu Pro Ala Phe Glu Pro Gly Thr Gly
305 310 315 320
Phe Gln Pro Phe Leu Lys Ile Tyr Gln Ser Met Gln Leu Val Tyr Thr
325 330 335
Ser Gly Val Tyr His Ile Ala Gly Pro Gly Pro Gln Gln Leu Cys Ile
340 345 350
Ser Leu Glu Pro Ala Leu Leu Leu Lys Gly Asp Val Met Val Thr Cys
355 360 365

Tyr His Lys Gly Gly Arg Gly Thr Asp Arg Thr Leu Val Phe Arg Val
 370 375 380
 Gln Phe His Thr Cys Thr Ile His Gly Pro Gln Leu Thr Phe Pro Lys
 385 390 395 400
 Asp Gln Leu Asp Glu Ala Trp Thr Asp Glu Arg Phe Pro Phe Gln Ala
 405 410 415
 Ser Val Glu Phe Val Phe Ser Ser Ser Pro Glu Lys Ile Lys Gly Ser
 420 425 430
 Thr Pro Arg Asn Asp Pro Ser Val Ser Val Asp Tyr Asn Thr Thr Glu
 435 440 445
 Pro Ala Val Arg Trp Asp Ser Tyr Glu Asn Phe Asn Gln His His Glu
 450 455 460
 Asp Ser Val Asp Gly Ser Leu Thr His Thr Arg Gly Pro Leu Asp Gly
 465 470 475 480
 Ser Pro Tyr Ala Gln Val Gln Arg Pro Pro Arg Gln Thr Pro Pro Ala
 485 490 495
 Pro Ser Pro Glu Pro Pro Pro Pro Pro Met Leu Ser Val Ser Ser Asp
 500 505 510
 Ser Gly His Ser Ser Thr Leu Thr Thr Glu Pro Ala Ala Glu Ser Pro
 515 520 525
 Gly Arg Pro Pro Pro Thr Ala Ala Glu Arg Gln Glu Leu Asp Arg Leu
 530 535 540
 Leu Gly Gly Cys Gly Val Ala Ser Gly Gly Arg Gly Ala Gly Arg Glu
 545 550 555 560
 Thr Ala Ile Leu Asp Asp Glu Glu Gln Pro Thr Val Gly Gly Gly Pro
 565 570 575
 His Leu Gly Val Tyr Pro Gly His Arg Pro Gly Leu Ser Arg His Cys
 580 585 590
 Ser Cys Arg Gln Gly Tyr Arg Glu Pro Cys Gly Val Pro Asn Gly Gly

595 600 605
Tyr Tyr Arg Pro Glu Gly Thr Leu Glu Arg Arg Arg Leu Ala Tyr Gly
610 615 620
Gly Tyr Glu Gly Ser Pro Gln Gly Tyr Ala Glu Ala Ser Met Glu Lys
625 630 635 640
Arg Arg Leu Cys Arg Ser Leu Ser Glu Gly Leu Tyr Pro Tyr Pro Pro
645 650 655
Glu Met Gly Lys Pro Ala Thr Gly Asp Phe Gly Tyr Arg Ala Ser Ser
660 665 670
Ala Ala Leu Ser Cys Ser Pro Arg Pro Thr Pro Ala Val Val His Phe
675 680 685
Lys Val Ser Ala Gln Gly Ile Thr Leu Thr Asp Asn Gln Arg Lys Leu
690 695 700
Phe Phe Arg Arg His Tyr Pro Val Asn Ser Ile Thr Phe Ser Ser Thr
705 710 715 720
Asp Pro Gln Asp Arg Arg Trp Thr Asn Pro Asp Gly Thr Thr Ser Lys
725 730 735
Ile Phe Gly Phe Val Ala Lys Lys Pro Gly Ser Pro Trp Glu Asn Val
740 745 750
Cys His Leu Phe Ala Glu Leu Asp Pro Asp Gln Pro Ala Gly Ala Ile
755 760 765
Val Thr Phe Ile Thr Lys Val Leu Leu Gly Gln Arg Lys
770 775 780

<210> 486

<211> 114

<212> PRT

<213> Homo sapiens

<400> 486

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Met Ile Lys Glu Leu Thr Gln Asn Leu Asn Thr Phe Phe Ile Glu Phe
  1             5             10             15
Ile Tyr Gly Cys Leu Leu Phe Val Glu Phe Phe Ser Ser Leu Phe Ser
          20             25             30
Phe Phe Phe Ser Phe Leu Ser Ser Leu Leu Phe Ser Phe Phe Ser Val
          35             40             45
Ala Gln Ala Gly Val Gln Trp His Asp Leu Gly Ser Leu Gln Pro Pro
          50             55             60
Pro Pro Arg Phe Lys His Leu Ser Cys Leu Ser Leu Pro Ser Ser Trp
          65             70             75             80
Asp Tyr Arg Cys Pro Pro Pro Ser Pro Ala Asn Phe Cys Ile Phe Ser
          85             90             95
Arg Asp Arg Val Ser Pro Cys Trp Leu Gly Trp Ser Arg Thr Ser Asp
          100            105            110
Leu Lys

```

<210> 487

<211> 141

<212> PRT

<213> Homo sapiens

<400> 487

```

Met Pro Val Ile Pro Ala Leu Gly Glu Ala Lys Gly Glu Val Leu Pro
  1             5             10             15
Pro Gly Asp Thr Thr Thr Ile Ile Pro Leu Asn Trp Met Leu Lys Ser

```

| | | | |
|---|-----|-----|----|
| 20 | 25 | 30 | |
| Pro Pro Gly His Phe Gly Leu Leu Leu Leu Leu Ser Gln Gln Ala Lys | | | |
| 35 | 40 | 45 | |
| Asn Gly Val Met Val Leu Ala Gly Val Thr Asp Pro Glu Tyr Gln Asp | | | |
| 50 | 55 | 60 | |
| Glu Ile Ser Leu Leu Leu His Asn Glu Gly His Leu Lys Glu Val Lys | | | |
| 65 | 70 | 75 | 80 |
| Met Glu Gly Ala Arg Leu Gly Leu Pro Gly Arg Ala Glu Ser Leu Glu | | | |
| 85 | 90 | 95 | |
| His Gln Val Gln Ser His Leu Asn Met Ile Ala Gln Ser Gln Arg Thr | | | |
| 100 | 105 | 110 | |
| Phe Gln Lys Lys Asp Ala Gly Lys Ala Ile Ile Leu Ser Lys Leu Thr | | | |
| 115 | 120 | 125 | |
| Gln Glu Gln Lys Thr Lys His Cys Met Phe Ser Leu His | | | |
| 130 | 135 | 140 | |

<210> 488

<211> 731

<212> PRT

<213> Homo sapiens

<400> 488

| | | | |
|---|----|----|----|
| Met His Leu Arg Leu Arg Pro Glu Val Gly Arg Ser Arg Ala Arg Ser | | | |
| 1 | 5 | 10 | 15 |
| Gly Glu Pro Ala Gly Ser Ala Ala Ala Arg Glu Val Met Ala Ala Ala | | | |
| 20 | 25 | 30 | |
| Pro Ala Arg Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Cys Ser | | | |
| 35 | 40 | 45 | |

Gly Ser Gly Ser Ser Ala Ser Arg Gly Phe Tyr Phe Asn Thr Val Leu
50 55 60
Ser Leu Ala Arg Ser Leu Ala Val Gln Arg Pro Ala Ser Leu Glu Lys
65 70 75 80
Val Arg Lys Leu Leu Cys Met Cys Pro Val Asp Phe His Gly Ile Phe
85 90 95
Gln Leu Asp Glu Arg Arg Arg Asp Ala Val Ile Ala Leu Gly Ile Phe
100 105 110
Leu Ile Glu Ser Asp Leu Gln His Lys Asp Cys Val Val Pro Tyr Leu
115 120 125
Leu Arg Leu Leu Lys Gly Leu Pro Lys Val Tyr Trp Val Glu Glu Ser
130 135 140
Thr Ala Arg Lys Gly Arg Gly Ala Leu Pro Val Ala Glu Ser Phe Ser
145 150 155 160
Phe Cys Leu Val Thr Leu Leu Ser Asp Val Ala Tyr Arg Asp Pro Ser
165 170 175
Leu Arg Asp Glu Ile Leu Glu Val Leu Leu Gln Val Leu His Val Leu
180 185 190
Leu Gly Met Cys Gln Ala Leu Glu Ile Gln Asp Lys Glu Tyr Leu Cys
195 200 205
Lys Tyr Ala Ile Pro Cys Leu Ile Gly Ile Ser Arg Ala Phe Gly Arg
210 215 220
Tyr Ser Asn Met Glu Glu Ser Leu Leu Ser Lys Leu Phe Pro Lys Ile
225 230 235 240
Pro Pro His Ser Leu Arg Val Leu Glu Glu Leu Glu Gly Val Arg Arg
245 250 255
Arg Ser Phe Asn Asp Phe Arg Ser Ile Leu Pro Ser Asn Leu Leu Thr
260 265 270
Val Cys Gln Glu Gly Thr Leu Lys Arg Lys Thr Ser Ser Val Ser Ser

275 280 285
Ile Ser Gln Val Ser Pro Glu Arg Gly Met Pro Pro Pro Ser Ser Pro
290 295 300
Gly Gly Ser Ala Phe His Tyr Phe Glu Ala Ser Cys Leu Pro Asp Gly
305 310 315 320
Thr Ala Leu Glu Pro Glu Tyr Tyr Phe Ser Thr Ile Ser Ser Ser Phe
325 330 335
Ser Val Ser Pro Leu Phe Asn Gly Val Thr Tyr Lys Glu Phe Asn Ile
340 345 350
Pro Leu Glu Met Leu Arg Glu Leu Leu Asn Leu Val Lys Lys Ile Val
355 360 365
Glu Glu Ala Val Leu Lys Ser Leu Asp Ala Ile Val Ala Ser Val Met
370 375 380
Glu Ala Asn Pro Ser Ala Asp Leu Tyr Tyr Thr Ser Phe Ser Asp Pro
385 390 395 400
Leu Tyr Leu Thr Met Phe Lys Met Leu Arg Asp Thr Leu Tyr Tyr Met
405 410 415
Lys Asp Leu Pro Thr Ser Phe Val Lys Glu Ile His Asp Phe Val Leu
420 425 430
Glu Gln Phe Asn Thr Ser Gln Gly Glu Leu Gln Lys Ile Leu His Asp
435 440 445
Ala Asp Arg Ile His Asn Glu Leu Ser Pro Leu Lys Leu Arg Cys Gln
450 455 460
Ala Asn Ala Ala Cys Val Asp Leu Met Val Trp Ala Val Lys Asp Glu
465 470 475 480
Gln Gly Ala Glu Asn Leu Cys Ile Lys Leu Ser Glu Lys Leu Gln Ser
485 490 495
Lys Thr Ser Ser Lys Val Ile Ile Ala His Leu Pro Leu Leu Ile Cys
500 505 510

Cys Leu Gln Gly Leu Gly Arg Leu Cys Glu Arg Phe Pro Val Val Val
515 520 525

His Ser Val Thr Pro Ser Leu Arg Asp Phe Leu Val Ile Pro Ser Pro
530 535 540

Val Leu Val Lys Leu Tyr Lys Tyr His Ser Gln Tyr His Thr Val Ala
545 550 555 560

Gly Asn Asp Ile Lys Ile Ser Val Thr Asn Glu His Ser Glu Ser Thr
565 570 575

Leu Asn Val Met Ser Gly Lys Lys Ser Gln Pro Ser Met Tyr Glu Gln
580 585 590

Leu Arg Asp Ile Ala Ile Asp Asn Ile Cys Arg Cys Leu Lys Ala Gly
595 600 605

Leu Thr Val Asp Pro Val Ile Val Glu Ala Phe Leu Ala Ser Leu Ser
610 615 620

Asn Arg Leu Tyr Ile Ser Gln Glu Ser Asp Lys Asp Ala His Leu Ile
625 630 635 640

Pro Asp His Thr Ile Arg Ala Leu Gly His Ile Ala Val Ala Leu Arg
645 650 655

Asp Thr Pro Lys Val Met Glu Pro Ile Leu Gln Ile Leu Gln Gln Lys
660 665 670

Phe Cys Gln Pro Pro Ser Pro Leu Asp Val Leu Ile Ile Asp Gln Leu
675 680 685

Gly Cys Leu Val Ile Thr Gly Asn Gln Tyr Ile Tyr Gln Glu Val Trp
690 695 700

Asn Leu Phe Gln Gln Ile Ser Val Lys Ala Ser Ser Val Val Tyr Ser
705 710 715 720

Ala Thr Lys Asp Tyr Lys Asp His Gly Tyr Arg
725 730

<210> 489

<211> 288

<212> PRT

<213> Homo sapiens

<400> 489

Met Ser Arg Glu Leu Ala Pro Leu Leu Leu Leu Leu Ser Ile His

1 5 10 15

Ser Ala Leu Ala Met Arg Ile Cys Ser Phe Asn Val Arg Ser Phe Gly

20 25 30

Glu Ser Lys Gln Glu Asp Lys Asn Ala Met Asp Val Ile Val Lys Val

35 40 45

Ile Lys Arg Cys Asp Ile Ile Leu Val Met Glu Ile Lys Asp Ser Asn

50 55 60

Asn Arg Ile Cys Pro Ile Leu Met Glu Lys Leu Asn Arg Asn Ser Arg

65 70 75 80

Arg Gly Ile Thr Tyr Asn Tyr Val Ile Ser Ser Arg Leu Gly Arg Asn

85 90 95

Thr Tyr Lys Glu Gln Tyr Ala Phe Leu Tyr Lys Glu Lys Leu Val Ser

100 105 110

Val Lys Arg Ser Tyr His Tyr His Asp Tyr Gln Asp Gly Asp Ala Asp

115 120 125

Val Phe Ser Arg Glu Pro Phe Val Val Trp Phe Gln Ser Pro His Thr

130 135 140

Ala Val Lys Asp Phe Val Ile Ile Pro Leu His Thr Thr Pro Glu Thr

145 150 155 160

Ser Val Lys Glu Ile Asp Glu Leu Val Glu Val Tyr Thr Asp Val Lys

165 170 175

His Arg Trp Lys Ala Glu Asn Phe Ile Phe Met Gly Asp Phe Asn Ala
 180 185 190

Gly Cys Ser Tyr Val Pro Lys Lys Ala Trp Lys Asn Val Arg Leu Arg
 195 200 205

Thr Asp Pro Arg Phe Val Trp Leu Ile Gly Asp Gln Glu Asp Thr Thr
 210 215 220

Val Lys Lys Ser Thr Asn Cys Ala Tyr Asp Arg Ile Val Leu Arg Gly
 225 230 235 240

Gln Glu Ile Val Ser Ser Val Val Pro Lys Ser Asn Ser Val Phe Asp
 245 250 255

Phe Gln Lys Ala Tyr Lys Leu Thr Glu Glu Glu Val Arg Leu Pro Ser
 260 265 270

Cys Leu Ser Met Pro Leu Ser Trp Lys Asp Glu Leu Ala Trp Ala Thr
 275 280 285

<210> 490

<211> 143

<212> PRT

<213> Homo sapiens

<400> 490

Met Pro Ser Thr Pro Ser Ser Arg Arg Ser Arg Asn Ser Ser Arg Ser
 1 5 10 15

Pro Pro Gln Thr Ala Asp Cys Trp Ala Ser Ser Lys Ala Arg Thr Pro
 20 25 30

Ser Ser Thr Glu Leu Gln Pro Cys Leu Glu Gly Arg Pro Pro Ser Cys
 35 40 45

His Pro Asp Leu Ser Gly Ser Pro Phe Pro Pro Ser Leu Asp Pro Lys

| | | |
|---|-----|-----|
| 50 | 55 | 60 |
| Ser Gly Ala Ile His Gln Glu Cys Arg Pro Leu Val Gly Gly Ala Gly | | |
| 65 | 70 | 75 |
| Cys Cys Leu Pro Ile Gly Gln Leu Leu Pro Glu Met Gln Met Arg Leu | | |
| 85 | 90 | 95 |
| Leu Glu Thr Gly Trp Glu Leu Ala Glu Pro Arg Trp Arg Arg Gly Ser | | |
| 100 | 105 | 110 |
| Ala Pro Gly His Phe Thr Gly Arg Glu Gly Glu Gly Lys Lys Ser Leu | | |
| 115 | 120 | 125 |
| Arg Leu Trp Asp Thr Asp Ser Gln Asn Lys His Ile Cys Gly Cys | | |
| 130 | 135 | 140 |

<210> 491

<211> 281

<212> PRT

<213> Homo sapiens

<400> 491

| | | |
|---|----|----|
| Met Ala Val Asp Ser Leu Leu Arg Ile Leu Lys Thr Leu Arg Leu Asp | | |
| 1 | 5 | 10 |
| Phe Ile Gln Glu Leu Glu Val Phe Tyr Trp Cys Arg Asp Phe Leu Val | | |
| 20 | 25 | 30 |
| Leu Ala Glu Pro Asn Leu Ser Ala Ile Gln Leu Gly Arg Ile Phe Asn | | |
| 35 | 40 | 45 |
| Leu Arg Ser Leu Lys Leu Phe Tyr Tyr Lys Trp Ala Phe Ser Ser Trp | | |
| 50 | 55 | 60 |
| Val Arg Arg Pro Ser Ser Tyr Phe Phe Ser Gln Leu Thr Met Leu Gly | | |
| 65 | 70 | 75 |
| | | 80 |

| | | | |
|---|-----|-----|-----|
| His Leu Arg Lys Leu His Leu Ser His Ser Tyr Leu Val Gly Lys Leu | | | |
| 85 | 90 | 95 | |
| His Tyr Ile Leu Ser Cys Leu Trp Val Pro Leu His Ser Leu Glu Ile | | | |
| 100 | 105 | 110 | |
| Cys Asn Cys Lys Leu Leu Asp Thr Asp Ile Thr Tyr Leu Ser Arg Ser | | | |
| 115 | 120 | 125 | |
| His His Thr Thr Cys Leu Lys Lys Leu Asp Leu Ser Val Asn Asp Leu | | | |
| 130 | 135 | 140 | |
| Ser Tyr Met Ile Pro Gly Pro Leu Gly Thr Leu Leu Arg Ala Val Ser | | | |
| 145 | 150 | 155 | 160 |
| Gly Thr Leu Gln His Leu Asp Leu Lys His Cys Trp Leu Lys Asp Ala | | | |
| 165 | 170 | 175 | |
| His Leu Ser Ala Leu Leu Pro Ala Leu Cys Arg Cys Ser His Leu Ser | | | |
| 180 | 185 | 190 | |
| Ser Leu Ser Leu Ser Asp Asn Pro Ile Ser Ser Ala Cys Leu Leu Ser | | | |
| 195 | 200 | 205 | |
| Leu Leu Glu His Thr Met Gly Leu Met Glu Leu Lys Gln Val Leu Tyr | | | |
| 210 | 215 | 220 | |
| Pro Ile Pro Val Asp Cys Cys Ile Tyr Leu His Gly Val Cys Arg Gly | | | |
| 225 | 230 | 235 | 240 |
| Pro Val Asn Glu Asp Lys Leu Cys Gln Leu Gln Ala Glu Ile Gln Lys | | | |
| 245 | 250 | 255 | |
| Gln Leu Gln Ala Met Gln Gln Ala Asp Met Gln Trp Ser Pro Ser Thr | | | |
| 260 | 265 | 270 | |
| Val Phe Ala Tyr Ala Ala Gly Ala Val | | | |
| 275 | 280 | | |

<210> 492

<211> 197

<212> PRT

<213> Homo sapiens

<400> 492

Met Val Gln Ala Pro Cys Leu Val Val Leu Ser Phe His Val Val Leu

1 5 10 15

Ser Leu Gln Val His Arg Ser Gln Glu Leu Gly Phe Trp Asn Leu His

20 25 30

Leu Asp Phe Arg Arg Cys Met Glu Met Pro Gly Cys Pro Gly Arg Asn

35 40 45

Leu Leu Gln Gly Trp Gly Ser His Gly Glu Pro Leu Leu Gly Gln Cys

50 55 60

Arg Arg Glu Met Trp Gly Gly Ser Pro Thr Gln Ser Pro Tyr Trp Gly

65 70 75 80

Thr Val Leu Gln Thr Gln Asn Gly Arg Ser Thr Asp Ser Leu His Cys

85 90 95

Val Pro Gly Lys Ala Thr Asp Thr Gln Cys Gln Pro Met Lys Ala Thr

100 105 110

Arg Arg Glu Thr Val Pro Cys Lys Ala Thr Gly Ala Glu Leu Leu Lys

115 120 125

Thr Met Gly Thr Tyr Leu Leu Tyr Gln His Asp Leu Asp Val Arg His

130 135 140

Gly Val Lys Gly Glu His Phe Gly Ala Leu Arg Phe Asp Cys Pro Ala

145 150 155 160

Gly Phe Trp Thr Cys Met Gly Pro Val Ala Pro Leu Phe Trp Pro Val

165 170 175

Ser Pro Ile Trp Asn Gly Tyr Ile Tyr Pro Met Pro Ile Pro Pro Leu

180 185 190

Tyr Pro Gly Ser Asn

195

<210> 493

<211> 218

<212> PRT

<213> Homo sapiens

<400> 493

Met Trp Leu His Arg Gly Pro Leu Arg Pro Pro Gly Val Arg Trp Thr

1 5 10 15

Pro Trp Ala Phe Leu Glu Ala Cys Ser Trp Gly Pro Ala Leu Ser Leu

20 25 30

Leu Gly Ser Gly His Ser Leu Pro Gly Thr His Glu Gln Ala Ala Trp

35 40 45

Ser Arg Gly Cys Gly Gln His Gly Gln Ser Pro Thr Gln Lys Cys Lys

50 55 60

Ser Ser Lys Glu Pro Leu Ala Gln Ala Pro Pro His Gln Gly Phe Ala

65 70 75 80

Asp Val Leu Glu Arg Pro Thr Leu Glu Pro Phe Gly Val Leu Ala Pro

85 90 95

Pro Val Pro Ser Ala Leu Val Glu Ala Ala Ala Thr Ser Pro Pro Gln

100 105 110

Gly Ala Pro Arg Gly Ile Leu Trp Asp Arg Cys Pro Gln Ile Gln Val

115 120 125

Leu Glu Gly Gln Arg Val Arg Phe Pro Ser Gln Pro Gln His Pro Ser

130 135 140

His Leu Ala Pro Arg Gly Gly Cys Gly Trp Arg Pro Asp Ser Arg Pro

145 150 155 160
 Leu Leu Pro Thr Pro Ser Gly Leu Ser Ser Phe Phe Pro Leu Asp Ala
 165 170 175
 Gln Cys Trp Pro Trp Arg Thr Val Ser Trp Arg Met Ala Val Gly Glu
 180 185 190
 Ala Val Phe Val Pro Leu Gln His Pro Pro Leu Leu His Gly Ser Pro
 195 200 205
 Ile Pro Lys Leu Leu Pro Gly Pro Leu Leu
 210 215

<210> 494

<211> 349

<212> PRT

<213> Homo sapiens

<400> 494

Met Ala Met Ala Phe Thr Asp Leu Leu Asp Ala Leu Gly Ser Met Gly
 1 5 10 15
 Arg Phe Gln Leu Asn His Thr Ala Leu Leu Leu Leu Pro Cys Gly Leu
 20 25 30
 Leu Ala Cys His Asn Phe Leu Gln Asn Phe Thr Ala Ala Val Pro Pro
 35 40 45
 His His Cys Arg Gly Pro Ala Asn His Thr Glu Ala Ser Thr Asn Asp
 50 55 60
 Ser Gly Ala Trp Leu Arg Ala Thr Ile Pro Leu Asp Gln Leu Gly Ala
 65 70 75 80
 Pro Glu Pro Cys Arg Arg Phe Thr Lys Pro Gln Trp Ala Leu Leu Ser
 85 90 95

Pro Asn Ser Ser Ile Pro Gly Ala Ala Thr Glu Gly Cys Lys Asp Gly
100 105 110
Trp Val Tyr Asn Arg Ser Val Phe Pro Ser Thr Ile Val Met Glu Trp
115 120 125
Asp Leu Val Cys Glu Ala Arg Thr Leu Arg Asp Leu Ala Gln Ser Val
130 135 140
Tyr Met Ala Gly Val Leu Val Gly Ala Ala Val Phe Gly Ser Leu Ala
145 150 155 160
Asp Arg Leu Gly Cys Lys Gly Pro Leu Val Trp Ser Tyr Leu Gln Leu
165 170 175
Ala Ala Ser Gly Ala Ala Thr Ala Tyr Phe Ser Ser Phe Ser Ala Tyr
180 185 190
Cys Val Phe Arg Phe Leu Met Gly Met Thr Phe Ser Gly Ile Ile Leu
195 200 205
Asn Ser Val Ser Leu Val Ala Ser Arg Val Ile Pro Leu Ala Pro Pro
210 215 220
Ala Trp Gln Val Pro Val Ser Cys Thr Glu Ser Ala Glu Gly Gly Cys
225 230 235 240
Asn Glu Arg Glu Glu Gly Gly Arg Gly Lys Ala Asp Gln Gly Gly Asp
245 250 255
Glu Leu Leu His Pro Lys Arg Val Cys Lys Cys Leu His Leu Gln Leu
260 265 270
Asn Leu Gly Pro Leu Pro Asn Pro Gly His Pro Gln Gly His Met Leu
275 280 285
Ser His Gly Asp Leu Arg Gly Arg Gln Arg Ser Ser Gly Ser Gly Glu
290 295 300
Gln Gly Gly Ser Cys Glu Pro Glu Ser Arg Asn Gly Arg Leu Pro Ala
305 310 315 320
Val Ala Pro Ala Gly Leu Gly Leu Pro Phe Val His Leu Pro Leu Ser

325 330 335
 Ala Arg Glu Lys Gln Ile Leu Ser Ser Lys Phe Gln Ser
 340 345

<210> 495

<211> 421

<212> PRT

<213> Homo sapiens

<400> 495

Met Arg Tyr Ser Leu Ser Pro Asp Asn His Leu Glu Asp Gly Ile Met
 1 5 10 15
 Asn Met Ala Asn Phe Leu Arg Gly Phe Glu Glu Lys Gly Ile Lys Asn
 20 25 30
 Asp Arg Pro Glu Asp Gln Leu Ser Lys Glu Lys Lys Lys Ile Leu Phe
 35 40 45
 Ser Phe Cys Glu Val Cys Asn Ile Gln Leu Asn Ser Ala Ala Gln Ala
 50 55 60
 Gln Val His Ser Asn Gly Lys Ser His Arg Lys Arg Val Lys Gln Leu
 65 70 75 80
 Ser Asp Gly Gln Pro Pro Pro Pro Ala Gln Ala Ser Pro Ser Ser Asn
 85 90 95
 Ser Ser Thr Gly Ser Thr Cys His Thr Thr Thr Leu Pro Ala Leu Val
 100 105 110
 Arg Thr Pro Thr Leu Met Met Gln Pro Ser Leu Asp Ile Lys Pro Phe
 115 120 125
 Met Ser Phe Pro Val Asp Ser Ser Ser Ala Val Gly Leu Phe Pro Asn
 130 135 140

Phe Asn Thr Met Asp Pro Val Gln Lys Ala Val Ile Asn His Thr Phe
 145 150 155 160
 Gly Val Ser Ile Pro Pro Lys Lys Lys Gln Val Ile Ser Cys Asn Val
 165 170 175
 Cys Gln Leu Arg Phe Asn Ser Asp Ser Gln Ala Glu Ala His Tyr Lys
 180 185 190
 Gly Ser Lys His Ala Lys Lys Val Lys Ala Leu Asp Ala Thr Lys Asn
 195 200 205
 Lys Pro Lys Met Val Pro Ser Lys Asp Ser Ala Lys Ala Asn Pro Ser
 210 215 220
 Cys Ser Ile Thr Pro Ile Thr Gly Asn Asn Ser Asp Lys Ser Glu Asp
 225 230 235 240
 Lys Gly Lys Leu Lys Ala Ser Ser Ser Ser Gln Pro Ser Ser Ser Glu
 245 250 255
 Ser Gly Ser Phe Leu Leu Lys Ser Gly Thr Thr Pro Leu Pro Pro Gly
 260 265 270
 Ala Ala Thr Ser Pro Ser Lys Ser Thr Asn Gly Ala Pro Gly Thr Val
 275 280 285
 Val Glu Ser Glu Glu Glu Lys Ala Lys Lys Leu Leu Tyr Cys Ser Leu
 290 295 300
 Cys Lys Val Ala Val Asn Ser Leu Ser Gln Leu Glu Ala His Asn Thr
 305 310 315 320
 Gly Ser Lys His Lys Thr Met Val Glu Ala Arg Asn Gly Ala Gly Pro
 325 330 335
 Ile Lys Ser Tyr Pro Arg Pro Gly Ser Arg Leu Lys Met Gln Asn Gly
 340 345 350
 Ser Lys Gly Ser Gly Leu Gln Asn Lys Thr Phe His Cys Glu Ile Cys
 355 360 365
 Asp Val His Val Asn Ser Glu Ile Gln Leu Lys Gln His Ile Ser Ser

370 375 380
 Arg Arg His Lys Asp Arg Val Ala Gly Lys Pro Leu Lys Pro Lys Tyr
 385 390 395 400
 Thr Pro Cys Lys Val Ile Gly Leu Leu Pro Lys Pro Leu Pro Pro Ala
 405 410 415
 Asn Arg Gln Leu Ser
 420

<210> 496

<211> 277

<212> PRT

<213> Homo sapiens

<400> 496

Met Gly Lys Asn Leu Lys Gly Ile Leu Thr Thr Glu Asn Ile Leu Ser
 1 5 10 15
 Ile Asp Asn Ser Val Asn Lys Lys Asp Leu Ser Ile Cys Gly Ser Ser
 20 25 30
 Gly Glu Glu Phe Phe Asn Asn Cys Glu Val Leu Gln Cys Gly Phe Ser
 35 40 45
 Val Pro Arg Glu Asn Ile Arg Thr Arg His Lys Ile Cys Pro Cys Asp
 50 55 60
 Lys Cys Glu Lys Val Phe Pro Ser Ile Ser Lys Leu Lys Arg His Tyr
 65 70 75 80
 Leu Ile His Thr Gly Gln Arg Pro Phe Gly Cys Asn Ile Cys Gly Lys
 85 90 95
 Ser Phe Arg Gln Ser Ala His Leu Lys Arg His Glu Gln Thr His Asn
 100 105 110

Glu Lys Ser Pro Tyr Ala Ser Leu Cys Gln Val Glu Phe Gly Asn Phe
115 120 125
Asn Asn Leu Ser Asn His Ser Gly Asn Asn Val Asn Tyr Asn Ala Ser
130 135 140
Gln Gln Cys Gln Ala Pro Gly Val Gln Lys Tyr Glu Val Ser Glu Ser
145 150 155 160
Asp Gln Met Ser Gly Val Lys Ala Glu Ser Gln Asp Phe Ile Pro Gly
165 170 175
Ser Thr Gly Gln Pro Cys Leu Pro Asn Val Leu Leu Glu Ser Glu Gln
180 185 190
Ser Asn Pro Phe Cys Ser Tyr Ser Glu His Gln Glu Lys Asn Asp Val
195 200 205
Phe Leu Tyr Arg Cys Ser Val Cys Ala Lys Ser Phe Arg Ser Pro Ser
210 215 220
Lys Leu Glu Arg His Tyr Leu Ile His Ala Gly Gln Lys Pro Phe Glu
225 230 235 240
Cys Ser Val Cys Gly Lys Thr Phe Arg Gln Ala Pro His Trp Lys Arg
245 250 255
His Gln Leu Thr His Phe Lys Glu Arg Pro Gln Gly Lys Val Val Ala
260 265 270
Leu Asp Ser Val Met
275

<210> 497

<211> 933

<212> PRT

<213> Homo sapiens

<400> 497

Met Ala Trp Lys Thr Leu Pro Ile Tyr Leu Leu Leu Leu Leu Ser Val

1 5 10 15

Phe Val Ile Gln Gln Val Ser Ser Gln Glu Leu Ser Cys Lys Gly Arg

20 25 30

Cys Phe Glu Ser Phe Glu Arg Gly Arg Glu Cys Asp Cys Asp Ala Gln

35 40 45

Cys Lys Lys Tyr Asp Lys Cys Cys Pro Asp Tyr Glu Ser Phe Cys Ala

50 55 60

Glu Val His Asn Pro Thr Ser Pro Pro Ser Ser Lys Lys Ala Pro Pro

65 70 75 80

Pro Ser Gly Ala Ser Gln Thr Ile Lys Ser Thr Thr Lys Arg Ser Pro

85 90 95

Lys Pro Pro Asn Lys Lys Lys Thr Lys Lys Val Ile Glu Ser Glu Glu

100 105 110

Ile Thr Glu Glu His Ser Val Ser Glu Asn Gln Glu Ser Ser Ser Ser

115 120 125

Ser Ser Ser Ser Ser Ser Ser Ser Thr Ile Arg Lys Ile Lys Ser Ser

130 135 140

Lys Asn Ser Ala Ala Asn Arg Glu Leu Gln Lys Lys Leu Lys Val Lys

145 150 155 160

Asp Asn Lys Lys Asn Arg Thr Lys Lys Lys Pro Thr Pro Lys Pro Pro

165 170 175

Val Val Asp Glu Ala Gly Ser Gly Leu Asp Asn Gly Asp Phe Lys Val

180 185 190

Thr Thr Pro Asp Thr Ser Thr Thr Gln His Asn Lys Val Ser Thr Ser

195 200 205

Pro Lys Ile Thr Thr Ala Lys Pro Ile Asn Pro Arg Pro Ser Leu Pro

210 215 220

Pro Asn Ser Asp Thr Ser Lys Glu Thr Ser Leu Thr Val Asn Lys Glu
225 230 235 240
Thr Thr Val Glu Thr Lys Glu Thr Thr Thr Thr Asn Lys Gln Thr Ser
245 250 255
Thr Asp Gly Lys Glu Lys Thr Thr Ser Ala Lys Glu Thr Gln Ser Ile
260 265 270
Glu Lys Thr Ser Ala Lys Asp Leu Ala Pro Thr Ser Lys Val Leu Ala
275 280 285
Lys Pro Thr Pro Lys Ala Glu Thr Thr Thr Lys Gly Pro Ala Leu Thr
290 295 300
Thr Pro Lys Glu Pro Thr Pro Thr Thr Pro Lys Glu Pro Ala Ser Thr
305 310 315 320
Thr Pro Lys Glu Pro Thr Pro Thr Thr Ile Lys Ser Ala Pro Thr Thr
325 330 335
Pro Lys Glu Pro Ala Pro Thr Thr Thr Lys Ser Ala Pro Thr Thr Pro
340 345 350
Lys Glu Pro Ala Pro Thr Thr Thr Lys Glu Pro Ala Pro Thr Thr Pro
355 360 365
Lys Glu Pro Ala Pro Thr Thr Pro Glu Thr Pro Pro Pro Thr Thr Ser
370 375 380
Glu Val Ser Thr Pro Thr Thr Thr Lys Glu Pro Thr Thr Ile His Lys
385 390 395 400
Ser Pro Asp Glu Ser Thr Pro Glu Leu Ser Ala Glu Pro Thr Pro Lys
405 410 415
Ala Leu Glu Asn Ser Pro Lys Glu Pro Gly Val Pro Thr Thr Lys Thr
420 425 430
Pro Ala Ala Thr Lys Pro Glu Met Thr Thr Thr Ala Lys Asp Lys Thr
435 440 445
Thr Glu Arg Asp Leu Arg Thr Thr Pro Glu Thr Thr Thr Ala Ala Pro

450 455 460
Lys Met Thr Lys Glu Thr Ala Thr Thr Thr Glu Lys Thr Thr Glu Ser
465 470 475 480
Lys Ile Thr Ala Thr Thr Thr Gln Val Thr Ser Thr Thr Thr Gln Asp
 485 490 495
Thr Thr Pro Phe Lys Ile Thr Thr Leu Lys Thr Thr Thr Leu Ala Pro
 500 505 510
Lys Val Thr Thr Thr Lys Lys Thr Ile Thr Thr Thr Glu Ile Met Asn
 515 520 525
Lys Pro Glu Glu Thr Ala Lys Pro Lys Asp Arg Ala Thr Asn Ser Lys
 530 535 540
Ala Thr Thr Pro Lys Pro Gln Lys Pro Thr Lys Ala Pro Lys Lys Pro
545 550 555 560
Thr Ser Thr Lys Lys Pro Lys Thr Met Pro Arg Val Arg Lys Pro Lys
 565 570 575
Thr Thr Pro Thr Pro Arg Lys Met Thr Ser Thr Met Pro Glu Leu Asn
 580 585 590
Pro Thr Ser Arg Ile Ala Glu Ala Met Leu Gln Thr Thr Thr Arg Pro
 595 600 605
Asn Gln Thr Pro Asn Ser Lys Leu Val Glu Val Asn Pro Lys Ser Glu
 610 615 620
Asp Ala Gly Gly Ala Glu Gly Glu Thr Pro His Met Leu Leu Arg Pro
625 630 635 640
His Val Phe Met Pro Glu Val Thr Pro Asp Met Asp Tyr Leu Pro Arg
 645 650 655
Val Pro Asn Gln Gly Ile Ile Ile Asn Pro Met Leu Ser Asp Glu Thr
 660 665 670
Asn Ile Cys Asn Gly Lys Pro Val Asp Gly Leu Thr Thr Leu Arg Asn
 675 680 685

Gly Thr Leu Val Ala Phe Arg Gly His Tyr Phe Trp Met Leu Ser Pro
 690 695 700
 Phe Ser Pro Pro Ser Pro Ala Arg Arg Ile Thr Glu Val Trp Gly Ile
 705 710 715 720
 Pro Ser Pro Ile Asp Thr Val Phe Thr Arg Cys Asn Cys Glu Gly Lys
 725 730 735
 Thr Phe Phe Phe Lys Asp Ser Gln Tyr Trp Arg Phe Thr Asn Asp Ile
 740 745 750
 Lys Asp Ala Gly Tyr Pro Lys Pro Ile Phe Lys Gly Phe Gly Gly Leu
 755 760 765
 Thr Gly Gln Ile Val Ala Ala Leu Ser Thr Ala Lys Tyr Lys Asn Trp
 770 775 780
 Pro Glu Ser Val Tyr Phe Phe Lys Arg Gly Gly Ser Ile Gln Gln Tyr
 785 790 795 800
 Ile Tyr Lys Gln Glu Pro Val Gln Lys Cys Pro Gly Arg Arg Pro Ala
 805 810 815
 Leu Asn Tyr Pro Val Tyr Gly Glu Thr Thr Gln Val Arg Arg Arg Arg
 820 825 830
 Phe Glu Arg Ala Ile Gly Pro Ser Gln Thr His Thr Ile Arg Ile Gln
 835 840 845
 Tyr Ser Pro Ala Arg Leu Ala Tyr Gln Asp Lys Gly Val Leu His Asn
 850 855 860
 Glu Val Lys Val Ser Ile Leu Trp Arg Gly Leu Pro Asn Val Val Thr
 865 870 875 880
 Ser Ala Ile Ser Leu Pro Asn Ile Arg Lys Pro Asp Gly Tyr Asp Tyr
 885 890 895
 Tyr Ala Phe Ser Lys Asp Gln Tyr Tyr Asn Ile Asp Val Pro Ser Arg
 900 905 910
 Thr Ala Arg Ala Ile Thr Thr Arg Ser Gly Gln Thr Leu Ser Lys Val

915 920 925
Trp Tyr Asn Cys Pro
930

<210> 498

<211> 216

<212> PRT

<213> Homo sapiens

<400> 498

Met Arg Trp Trp His Arg Cys Gly Gln Pro Gly Thr Asp Val Val Leu
1 5 10 15
Thr Gly Lys Asn Leu Pro Arg Pro Thr Leu Ser Thr Pro Ala Glu Ser
20 25 30
Ser Gln Pro Gly Gln Gly Ala His Val Gly Pro Asn Ala His Ala Pro
35 40 45
His Ser Cys Gly Glu Leu Thr Ala Arg Pro Arg Gly Ala Arg Gly Ala
50 55 60
Gln Arg Pro Arg Ser Pro Leu Leu Arg Arg Ala His Ser Gln Ala Arg
65 70 75 80
Gly Arg Thr Trp Gly Pro Thr Pro Thr Leu Pro Thr Pro Ala Glu Ser
85 90 95
Ser Gln Pro Gly Gln Gly Ala His Val Gly Pro Asn Ala His Ala Pro
100 105 110
His Ser Cys Gly Glu Leu Thr Ala Arg Pro Gly Gly Ala Arg Gly Ala
115 120 125
Gln Arg Pro His Ser Pro Leu Leu Arg Arg Ala His Ser Gln Ala Arg
130 135 140

Gly Arg Thr Trp Gly Pro Thr Phe Arg Asn Lys Ile Ile Val Tyr Ser
 145 150 155 160
 Phe Leu Phe Phe Leu Lys Ser Val Phe Leu Leu Arg Thr Pro Asp Val
 165 170 175
 Cys Gly Ser Glu Ala Gln Trp Ala Tyr Ser Tyr Leu Thr Trp Gln Thr
 180 185 190
 Trp Lys Trp Lys Leu Leu Cys Ile Thr Arg Ile Ser Arg Ala Ser Ala
 195 200 205
 Ser Cys Trp Pro Asp Arg Val Pro
 210 215

<210> 499

<211> 904

<212> PRT

<213> Homo sapiens

<400> 499

Met Ala Glu Ala Leu Leu Ala Cys Cys Pro Gly Asp Gln Lys Pro Gly
 1 5 10 15
 Ile Leu Ala Arg Leu Lys Asp Ile Lys Ala Gln Trp Glu Glu Thr Val
 20 25 30
 Thr Tyr Met Thr His Cys His Ser Arg Ile Glu Trp Val Trp Leu His
 35 40 45
 Trp Ser Glu Tyr Leu Leu Ala Arg Asp Glu Phe Tyr Arg Trp Phe Gln
 50 55 60
 Lys Met Met Val Thr Leu Glu Pro His Ile Glu Leu Gln Leu Gly Leu
 65 70 75 80
 Lys Glu Lys Gln Trp Gln Leu Ser His Ala Gln Val Leu Leu His Asn

| | | |
|---|-----|-----|
| 85 | 90 | 95 |
| Val Asp Asn Gln Ala Val Leu Leu Asp Arg Leu Leu Glu Glu Ala Ala | | |
| 100 | 105 | 110 |
| Ser Leu Phe Asn Arg Ile Gly Asp Pro Ser Val Asp Glu Asp Ala Gln | | |
| 115 | 120 | 125 |
| Lys Arg Met Lys Ala Glu Tyr Asp Ala Val Lys Ala Lys Ala Gln Lys | | |
| 130 | 135 | 140 |
| Arg Val Asp Leu Leu Glu Gln Val Ala Arg Glu His Glu Glu Tyr Gln | | |
| 145 | 150 | 155 |
| Ala Gly Val Asp Glu Phe Gln Leu Trp Leu Lys Ala Val Val Glu Lys | | |
| 165 | 170 | 175 |
| Val Asn Gly Cys Leu Gly Arg Asn Cys Lys Leu Pro Ile Thr Gln Arg | | |
| 180 | 185 | 190 |
| Leu Ser Thr Leu Gln Asp Ile Ala Lys Asp Phe Pro Arg Gly Glu Glu | | |
| 195 | 200 | 205 |
| Ser Leu Glu Thr Leu Glu Glu Gln Ser Ala Gly Val Ile Arg Asn Thr | | |
| 210 | 215 | 220 |
| Ser Pro Leu Gly Ala Glu Lys Ile Thr Gly Glu Leu Glu Glu Met Arg | | |
| 225 | 230 | 235 |
| Lys Val Leu Glu Lys Leu Arg Ala Leu Trp Glu Glu Glu Glu Glu Arg | | |
| 245 | 250 | 255 |
| Leu Arg Gly Leu Leu Arg Ser Arg Gly Ala Trp Glu Gln Gln Ile Lys | | |
| 260 | 265 | 270 |
| Gln Leu Glu Ala Glu Leu Ser Glu Phe Arg Met Val Leu Gln Arg Leu | | |
| 275 | 280 | 285 |
| Ala Gln Glu Gly Leu Gln Pro Ala Ala Lys Ala Gly Thr Glu Asp Glu | | |
| 290 | 295 | 300 |
| Leu Val Ala His Trp Arg Arg Tyr Ser Ala Thr Arg Ala Ala Leu Ala | | |
| 305 | 310 | 315 |
| | | 320 |

Ser Glu Glu Pro Arg Val Asp Arg Leu Gln Ala Gln Leu Lys Glu Leu
325 330 335
Ile Val Phe Pro His Asn Leu Lys Pro Leu Ser Asp Ser Val Ile Ala
340 345 350
Thr Ile Gln Glu Tyr Gln Ser Leu Lys Val Lys Ser Ala Arg Leu Arg
355 360 365
Asn Ala Ala Ala Val Glu Leu Trp Gln His Phe Gln Arg Pro Leu Gln
370 375 380
Asp Leu Gln Leu Trp Lys Ala Leu Ala Gln Arg Leu Leu Glu Val Thr
385 390 395 400
Ala Ser Leu Pro Asp Leu Pro Ser Leu His Thr Phe Leu Pro Gln Ile
405 410 415
Glu Ala Ala Leu Met Glu Ser Ser Arg Leu Lys Glu Leu Leu Thr Met
420 425 430
Leu Gln Leu Lys Lys Asp Leu Leu Ile Gly Ile Phe Gly Gln Glu Arg
435 440 445
Ala Thr Ala Leu Leu Glu Gln Val Ala Gly Ser Met Arg Asp Arg Asp
450 455 460
Leu Leu His Asn Ser Leu Leu Gln Arg Lys Ser Lys Leu Gln Ser Leu
465 470 475 480
Leu Ala Gln His Lys Asp Phe Gly Ala Ala Phe Glu Pro Leu Gln Arg
485 490 495
Lys Leu Leu Asp Leu Gln Val Arg Val Gln Ala Glu Lys Gly Leu Gln
500 505 510
Arg Asp Leu Pro Gly Lys Gln Ala Gln Leu Ser Arg Leu Gln Gly Leu
515 520 525
Gln Glu Glu Gly Leu Asp Leu Gly Ala Gln Met Glu Ala Ala Arg Pro
530 535 540
Leu Val Gln Glu Asn Pro Asn His Gln His Lys Met Asp Gln Leu Ser

545 550 555 560
Ser Asp Phe Gln Ala Leu Gln Arg Ser Leu Glu Asp Leu Val Asp Arg
 565 570 575
Cys Arg Gln Ser Val Gln Glu His Cys Thr Phe Ser His Gln Leu Leu
 580 585 590
Glu Leu Arg Gln Trp Ile Val Val Thr Met Gln Lys Leu Glu Ala His
 595 600 605
Arg Gly Glu Ala Gly Pro Gly Asp Ala Glu Ser Gln Glu Ala Glu Phe
 610 615 620
Glu Arg Leu Val Ala Glu Phe Pro Glu Lys Glu Ala Gln Leu Ser Leu
625 630 635 640
Val Glu Ala Gln Gly Trp Leu Val Met Glu Lys Ser Ser Pro Glu Gly
 645 650 655
Ala Ala Val Val Gln Glu Glu Leu Arg Glu Leu Ala Glu Ser Trp Arg
 660 665 670
Ala Leu Arg Leu Leu Glu Glu Ser Leu Leu Ser Leu Ile Arg Asn Trp
 675 680 685
His Leu Gln Arg Met Glu Val Asp Ser Gly Lys Lys Met Val Phe Thr
 690 695 700
Asn Asn Ile Pro Lys Ser Gly Phe Leu Ile Asn Pro Met Asp Pro Ile
705 710 715 720
Pro Arg His Arg Arg Arg Glu Glu Glu Gly Ser His Glu Asp Phe Ser
 725 730 735
Gln Leu Leu Arg Asn Phe Gly Gln Trp Leu Gln Val Glu Asn Ser Lys
 740 745 750
Leu Val Arg Ile Ile Ala Met Arg Thr Ser Thr Ala Glu Asp Leu Arg
 755 760 765
Thr Arg Lys Ser Lys Leu Gln Glu Leu Glu Ala Arg Val Pro Glu Gly
 770 775 780

Gln His Leu Phe Glu Asn Leu Leu Arg Leu Gly Pro Ala Arg Gly Thr
 785 790 795 800
 Ser Asp Glu Leu Glu Asp Leu Arg Tyr Gln Trp Met Leu Tyr Lys Ser
 805 810 815
 Lys Leu Lys Asp Ser Gly His Leu Leu Thr Gln Ser Ser Pro Gly Glu
 820 825 830
 Pro Thr Gly Phe Gln Lys Thr Arg Arg Trp Arg Gly Leu Gly Ser Leu
 835 840 845
 Phe Arg Arg Ala Cys Cys Val Ala Leu Pro Leu Gln Leu Leu Leu Leu
 850 855 860
 Leu Phe Leu Leu Leu Leu Phe Leu Leu Pro Ile Arg Glu Glu Asp Arg
 865 870 875 880
 Ser Cys Thr Leu Ala Asn Asn Phe Ala Arg Ser Phe Thr Leu Met Leu
 885 890 895
 Arg Tyr Asn Gly Pro Pro Pro Thr
 900

<210> 500

<211> 164

<212> PRT

<213> Homo sapiens

<400> 500

Met Ser Glu Pro Ser Pro Cys Pro Pro Glu Gly Val Gln Leu Cys Gly
 1 5 10 15
 Pro Ala Leu Tyr Arg Leu Val Pro Cys Val Cys Ala Val Ser Val Cys
 20 25 30
 Leu Leu Pro Gln Val Leu Lys Lys Tyr Pro Arg Leu Trp Cys Met Thr

35 40 45
 Lys Pro Pro Ser Arg Arg Pro Lys Leu Tyr Ile Val Asn Leu Gln Trp
 50 55 60
 Thr Pro Lys Asp Asp Trp Ala Ala Leu Lys Leu His Gly Lys Cys Asp
 65 70 75 80
 Asp Val Met Arg Leu Leu Met Ala Glu Leu Gly Leu Glu Ile Pro Ala
 85 90 95
 Tyr Ser Arg Trp Gln Asp Pro Ile Phe Ser Leu Ala Thr Pro Leu Arg
 100 105 110
 Ala Gly Glu Glu Gly Ser His Ser Arg Lys Ser Leu Cys Arg Ser Arg
 115 120 125
 Glu Glu Ala Pro Pro Gly Asp Arg Gly Ala Pro Leu Ser Ser Ala Pro
 130 135 140
 Ile Leu Gly Gly Trp Phe Gly Arg Gly Cys Thr Lys Arg Thr Lys Arg
 145 150 155 160
 Lys Lys Val Thr

<210> 501

<211> 477

<212> PRT

<213> Homo sapiens

<400> 501

Met Lys Leu Ile Arg Ser Ser Ser Cys His Val Gly Ser Ala Arg Lys
 1 5 10 15
 Leu His His Trp Arg Ala Gly Gln Thr Glu Pro Gly Trp Ala Gly Thr
 20 25 30

Arg His Asp Ser Pro Val Pro Leu Pro Pro Arg Gly Gly Leu Ala Ala
 35 40 45
 Asp Asn Val Leu Leu Ser Ser Asp Gly Ser His Ala Ala Leu Cys Asp
 50 55 60
 Phe Gly His Ala Val Cys Leu Gln Pro Asp Gly Leu Gly Lys Ser Leu
 65 70 75 80
 Leu Thr Gly Asp Tyr Ile Pro Gly Thr Glu Thr His Met Ala Pro Glu
 85 90 95
 Val Val Leu Gly Arg Ser Cys Asp Ala Lys Val Asp Val Trp Ser Ser
 100 105 110
 Cys Cys Met Met Leu His Met Leu Asn Gly Cys His Pro Trp Thr Gln
 115 120 125
 Phe Phe Arg Gly Pro Leu Cys Leu Lys Ile Ala Ser Glu Pro Pro Pro
 130 135 140
 Val Arg Glu Ile Pro Pro Ser Cys Ala Pro Leu Thr Ala Gln Ala Ile
 145 150 155 160
 Gln Glu Gly Leu Arg Lys Glu Pro Ile His Arg Val Ser Ala Ala Glu
 165 170 175
 Leu Gly Gly Lys Val Asn Arg Ala Leu Gln Gln Val Gly Gly Leu Lys
 180 185 190
 Ser Pro Trp Arg Gly Glu Tyr Lys Glu Pro Arg His Pro Pro Pro Asn
 195 200 205
 Gln Ala Asn Tyr His Gln Thr Leu His Ala Gln Pro Arg Glu Leu Ser
 210 215 220
 Pro Arg Ala Pro Gly Pro Arg Pro Ala Glu Glu Thr Thr Gly Arg Ala
 225 230 235 240
 Pro Lys Leu Gln Pro Pro Leu Pro Pro Glu Pro Pro Glu Pro Asn Lys
 245 250 255
 Ser Pro Pro Leu Thr Leu Ser Lys Glu Glu Ser Gly Met Trp Glu Pro

260 265 270
Leu Pro Leu Ser Ser Leu Glu Pro Ala Pro Ala Arg Asn Pro Ser Ser
275 280 285
Pro Glu Arg Lys Ala Thr Val Pro Glu Gln Glu Leu Gln Gln Leu Glu
290 295 300
Ile Glu Leu Phe Leu Asn Ser Leu Ser Gln Pro Phe Ser Leu Glu Glu
305 310 315 320
Gln Glu Gln Ile Leu Ser Cys Leu Ser Ile Asp Ser Leu Ser Leu Ser
325 330 335
Asp Asp Ser Glu Lys Asn Pro Ser Lys Ala Ser Gln Ser Ser Arg Asp
340 345 350
Thr Leu Ser Ser Gly Val His Ser Trp Ser Ser Gln Ala Glu Ala Arg
355 360 365
Ser Ser Ser Trp Asn Met Val Leu Ala Arg Gly Arg Pro Thr Asp Thr
370 375 380
Pro Ser Tyr Phe Asn Gly Val Lys Val Gln Ile Gln Ser Leu Asn Gly
385 390 395 400
Glu His Leu His Ile Arg Glu Phe His Arg Val Lys Val Gly Asp Ile
405 410 415
Ala Thr Gly Ile Ser Ser Gln Ile Pro Ala Ala Ala Phe Ser Leu Val
420 425 430
Thr Lys Asp Gly Gln Pro Val Arg Tyr Asp Met Glu Val Pro Asp Ser
435 440 445
Gly Ile Asp Leu Gln Cys Thr Leu Ala Pro Asp Gly Ser Phe Ala Trp
450 455 460
Ser Trp Arg Val Lys His Gly Gln Leu Glu Asn Arg Pro
465 470 475

<210> 502

<211> 486

<212> PRT

<213> Homo sapiens

<400> 502

Met Gly Ser Glu Lys Asp Ser Glu Ser Pro Arg Ser Thr Ser Leu His

1 5 10 15

Ala Ala Ala Pro Asp Pro Lys Cys Arg Ser Gly Gly Arg Arg Arg Arg

20 25 30

Leu Leu Ser Cys Pro His Arg Ser Cys Arg Asp Cys Leu Arg His Tyr

35 40 45

Leu Arg Leu Glu Ile Ser Glu Ser Arg Val Pro Ile Ser Cys Pro Glu

50 55 60

Cys Ser Glu Arg Leu Asn Pro His Asp Ile Arg Leu Leu Leu Ala Asp

65 70 75 80

Pro Pro Leu Met His Lys Tyr Glu Glu Phe Met Leu Arg Arg Tyr Leu

85 90 95

Ala Ser Asp Pro Asp Cys Arg Trp Cys Pro Ala Pro Asp Cys Gly Tyr

100 105 110

Ala Val Ile Ala Tyr Gly Cys Ala Ser Cys Pro Lys Leu Thr Cys Glu

115 120 125

Arg Glu Gly Cys Gln Thr Glu Phe Cys Tyr His Cys Lys Gln Ile Trp

130 135 140

His Pro Asn Gln Thr Cys Asp Met Ala Arg Gln Gln Arg Ala Gln Thr

145 150 155 160

Leu Arg Val Arg Thr Lys His Thr Ser Gly Leu Ser Tyr Gly Gln Glu

165 170 175

Ser Gly Pro Asp Asp Ile Lys Pro Cys Pro Arg Cys Ser Ala Tyr Ile

| | | | |
|---|-----|-----|-----|
| 180 | 185 | 190 | |
| Ile Lys Met Asn Asp Gly Ser Cys Asn His Met Thr Cys Ala Val Cys | | | |
| 195 | 200 | 205 | |
| Gly Cys Glu Phe Cys Trp Leu Cys Met Lys Glu Ile Ser Asp Leu His | | | |
| 210 | 215 | 220 | |
| Tyr Leu Ser Pro Ser Gly Cys Thr Phe Trp Gly Lys Lys Pro Trp Ser | | | |
| 225 | 230 | 235 | 240 |
| Arg Lys Lys Lys Ile Leu Trp Gln Leu Gly Thr Leu Ile Gly Ala Pro | | | |
| 245 | 250 | 255 | |
| Val Gly Ile Ser Leu Ile Ala Gly Ile Ala Ile Pro Ala Met Val Ile | | | |
| 260 | 265 | 270 | |
| Gly Ile Pro Val Tyr Val Gly Arg Lys Ile His Ser Arg Tyr Glu Gly | | | |
| 275 | 280 | 285 | |
| Arg Lys Thr Ser Lys His Lys Arg Asn Leu Ala Ile Thr Gly Gly Val | | | |
| 290 | 295 | 300 | |
| Thr Leu Ser Val Ile Ala Ser Pro Val Ile Ala Ala Val Ser Val Gly | | | |
| 305 | 310 | 315 | 320 |
| Ile Gly Val Pro Ile Met Leu Ala Tyr Val Tyr Gly Val Val Pro Ile | | | |
| 325 | 330 | 335 | |
| Ser Leu Cys Arg Gly Gly Gly Cys Gly Val Ser Thr Ala Asn Gly Lys | | | |
| 340 | 345 | 350 | |
| Gly Val Lys Ile Glu Phe Asp Glu Asp Asp Gly Pro Ile Thr Val Ala | | | |
| 355 | 360 | 365 | |
| Asp Ala Trp Arg Ala Leu Lys Asn Pro Ser Ile Gly Glu Ser Ser Ile | | | |
| 370 | 375 | 380 | |
| Glu Gly Leu Thr Ser Val Leu Ser Thr Ser Gly Ser Pro Thr Asp Gly | | | |
| 385 | 390 | 395 | 400 |
| Leu Ser Val Met Gln Gly Pro Tyr Ser Glu Thr Ala Ser Phe Ala Ala | | | |
| 405 | 410 | 415 | |

Leu Ser Gly Gly Thr Leu Ser Gly Gly Ile Leu Ser Ser Gly Lys Gly
 420 425 430
 Lys Tyr Ser Arg Leu Glu Val Gln Ala Asp Val Gln Lys Glu Ile Phe
 435 440 445
 Pro Lys Asp Thr Ala Ser Leu Gly Ala Ile Ser Asp Asn Ala Ser Thr
 450 455 460
 Arg Ala Met Ala Gly Ser Ile Ile Ser Ser Tyr Asn Pro Gln Asp Arg
 465 470 475 480
 Phe Ser Met Ile His Ala
 485

<210> 503

<211> 492

<212> PRT

<213> Homo sapiens

<400> 503

Met Ala Met Ala Leu Pro Met Pro Gly Pro Gln Glu Ala Val Val Phe
 1 5 10 15
 Glu Asp Val Ala Val Tyr Phe Thr Arg Ile Glu Trp Ser Cys Leu Ala
 20 25 30
 Pro Asp Gln Gln Ala Leu Tyr Arg Asp Val Met Leu Glu Asn Tyr Gly
 35 40 45
 Asn Leu Ala Ser Leu Gly Phe Leu Val Ala Lys Pro Ala Leu Ile Ser
 50 55 60
 Leu Leu Glu Gln Gly Glu Glu Pro Gly Ala Leu Ile Leu Gln Val Ala
 65 70 75 80
 Glu Gln Ser Val Ala Lys Ala Ser Leu Cys Thr Asp Ser Arg Met Glu

| | | |
|---|-----|-----|
| 85 | 90 | 95 |
| Ala Gly Ile Met Glu Ser Pro Leu Gln Arg Lys Leu Ser Arg Gln Ala | | |
| 100 | 105 | 110 |
| Gly Leu Pro Gly Thr Val Trp Gly Cys Leu Pro Trp Gly His Pro Val | | |
| 115 | 120 | 125 |
| Gly Gly His Pro Ala Pro Pro His Pro His Gly Gly Pro Glu Asp Gly | | |
| 130 | 135 | 140 |
| Ser Asp Lys Pro Thr His Pro Arg Ala Arg Glu His Ser Ala Ser Pro | | |
| 145 | 150 | 155 |
| 160 | | |
| Arg Val Leu Gln Glu Asp Leu Gly Arg Pro Val Gly Ser Ser Ala Pro | | |
| 165 | 170 | 175 |
| Arg Tyr Arg Cys Val Cys Gly Lys Ala Phe Arg Tyr Asn Ser Leu Leu | | |
| 180 | 185 | 190 |
| Leu Arg His Gln Ile Val His Thr Gly Ala Lys Pro Phe Gln Cys Thr | | |
| 195 | 200 | 205 |
| Glu Cys Gly Lys Ala Phe Lys Gln Ser Ser Ile Leu Leu Arg His Gln | | |
| 210 | 215 | 220 |
| Leu Ile His Thr Glu Glu Lys Pro Phe Gln Cys Gly Glu Cys Gly Lys | | |
| 225 | 230 | 235 |
| 240 | | |
| Ala Phe Arg Gln Ser Thr Gln Leu Ala Ala His His Arg Val His Thr | | |
| 245 | 250 | 255 |
| Arg Glu Arg Pro Tyr Ala Cys Gly Glu Cys Gly Lys Ala Phe Ser Arg | | |
| 260 | 265 | 270 |
| Ser Ser Arg Leu Leu Gln His Gln Lys Phe His Thr Gly Glu Lys Pro | | |
| 275 | 280 | 285 |
| Phe Ala Cys Thr Glu Cys Gly Lys Ala Phe Cys Arg Arg Phe Thr Leu | | |
| 290 | 295 | 300 |
| Asn Glu His Gly Arg Ile His Ser Gly Glu Arg Pro Tyr Arg Cys Leu | | |
| 305 | 310 | 315 |
| 320 | | |

Arg Cys Gly Gln Arg Phe Ile Arg Gly Ser Ser Leu Leu Lys His His
325 330 335
Arg Leu His Ala Gln Glu Gly Ala Gln Asp Gly Gly Ala Gly Gln Gly
340 345 350
Ala Leu Leu Gly Ala Ala Gln Arg Pro Gln Ala Gly Asp Pro Pro His
355 360 365
Glu Cys Pro Val Cys Gly Arg Pro Phe Arg His Asn Ser Leu Leu Leu
370 375 380
Leu His Leu Arg Leu His Thr Gly Glu Lys Pro Phe Glu Cys Ala Glu
385 390 395 400
Cys Gly Lys Ala Phe Gly Arg Lys Ser Asn Leu Thr Leu His Gln Lys
405 410 415
Ile His Thr Lys Glu Lys Pro Phe Ala Cys Thr Glu Cys Gly Lys Ala
420 425 430
Phe Arg Arg Ser Tyr Thr Leu Asn Glu His Tyr Arg Leu His Ser Gly
435 440 445
Glu Arg Pro Tyr Arg Cys Arg Ala Cys Gly Arg Ala Cys Ser Arg Leu
450 455 460
Ser Thr Leu Ile Gln His Gln Lys Val His Gly Arg Glu Pro Gly Glu
465 470 475 480
Asp Thr Glu Gly Arg Arg Ala Pro Cys Trp Ala Ser
485 490

<210> 504

<211> 232

<212> PRT

<213> Homo sapiens

<400> 504

Met Ile Arg Lys Val Lys Val Glu Asp Glu Asp Gln Glu Ala Glu Glu

1 5 10 15

Glu Val Glu Trp Pro Gln His Leu Ser Leu Leu Pro Ser Pro Phe Pro

20 25 30

Ala Pro Asp Leu Gly His Leu Ala Ala Ala Tyr Lys Leu Glu Pro Gly

35 40 45

Ala Pro Gly Ala Leu Ser Gly Leu Ala Leu Ser Gly Trp Gly Pro Met

50 55 60

Pro Glu Lys Pro Tyr Gly Cys Gly Glu Cys Glu Arg Arg Phe Arg Asp

65 70 75 80

Gln Leu Thr Leu Arg Leu His Gln Arg Leu His Arg Gly Glu Gly Pro

85 90 95

Cys Ala Cys Pro Ser Leu Val Arg Ser Pro Arg Gly Gly Ala Ala Pro

100 105 110

Ala Leu Leu Leu Ser Leu Val Leu Thr Arg Thr Leu Ser Cys Pro Gln

115 120 125

Phe Arg Glu Ala Arg Ala Met Arg Pro Pro Gly Val Ser Lys Ala Thr

130 135 140

Trp Ala Ala Ala Arg Arg Phe Gly Arg Arg Gly Thr Pro Val Ser Phe

145 150 155 160

Pro Gln Cys Leu Arg Pro His Ser Ile Pro Ser Ser Asp Leu Leu Gly

165 170 175

Gln Arg Leu Ser Glu Pro Leu Leu Gly Thr Ala Glu Leu Lys Phe Leu

180 185 190

Glu Gly Ser His Pro Gly Ala Pro Leu Glu Ser Arg Tyr Phe Pro Asp

195 200 205

Pro Ala Arg Pro Gln Pro Gly Gln Glu Arg Val Val Ile Tyr Val Leu

210 215 220

Lys Val Ser Leu Lys Leu Lys Ser

225

230

<210> 505

<211> 158

<212> PRT

<213> Homo sapiens

<400> 505

Met Gly Arg Ser Pro Arg Lys Ile Asp Gln Phe Cys Asn Ser Ser Asn

1

5

10

15

Met Val His Gly Ser Val Thr Phe Arg Asp Val Ala Ile Asp Phe Ser

20

25

30

Gln Glu Glu Trp Glu Cys Leu Gln Pro Asp Gln Arg Thr Leu Tyr Arg

35

40

45

Asp Val Met Leu Glu Asn Tyr Ser His Leu Ile Ser Leu Gly Ser Ser

50

55

60

Ile Ser Lys Pro Asp Val Ile Thr Leu Leu Glu Gln Glu Lys Glu Pro

65

70

75

80

Trp Met Val Val Arg Lys Glu Thr Ser Arg Arg Tyr Pro Asp Leu Glu

85

90

95

Leu Lys Tyr Gly Pro Glu Lys Val Ser Pro Glu Asn Asp Thr Ser Glu

100

105

110

Val Asn Leu Pro Lys Gln Ile Ser Ser Leu Ala Ser Lys Pro Ser Phe

115

120

125

Thr Ala Ile His Ile Gln Arg Arg Ile His Cys Arg Ile Cys Ile Ala

130

135

140

Phe Gly Tyr Leu Ser Leu Val Tyr Cys Ser Leu Glu Ile Leu

145

150

155

<210> 506

<211> 296

<212> PRT

<213> Homo sapiens

<400> 506

Met Ala Gln Arg Val Lys Phe Pro Thr Asp Thr Leu Gln Glu Leu Leu

1

5

10

15

Asp Val His Ala Ala Cys Glu Arg Glu Ala Ile Ala Ile Phe Met Glu

20

25

30

His Ser Phe Lys Asp Glu Asn Gln Glu Phe Gln Lys Lys Phe Met Glu

35

40

45

Thr Thr Met Asn Lys Lys Gly Asp Phe Leu Leu Gln Asn Glu Glu Ser

50

55

60

Ser Val Gln Tyr Cys Gln Ala Lys Leu Asn Glu Leu Ser Lys Gly Leu

65

70

75

80

Met Glu Ser Ile Ser Ala Gly Ser Phe Ser Val Pro Gly Gly His Lys

85

90

95

Leu Tyr Met Glu Thr Lys Glu Arg Ile Glu Gln Asp Tyr Trp Gln Val

100

105

110

Pro Arg Lys Gly Val Lys Ala Lys Glu Val Phe Gln Arg Phe Leu Glu

115

120

125

Ser Gln Met Val Ile Glu Glu Ser Ile Leu Gln Ser Asp Lys Ala Leu

130

135

140

Thr Asp Arg Glu Lys Ala Val Ala Val Asp Arg Ala Lys Lys Glu Ala

145

150

155

160

Ala Glu Lys Glu Gln Glu Leu Leu Lys Gln Lys Leu Gln Glu Gln Gln
 165 170 175
 Gln Gln Met Glu Ala Gln Val Lys Ser Arg Lys Glu Asn Ile Ala Gln
 180 185 190
 Leu Lys Glu Lys Leu Gln Met Glu Arg Glu His Leu Leu Arg Glu Gln
 195 200 205
 Ile Met Met Leu Glu His Thr Gln Lys Val Gln Asn Asp Trp Leu His
 210 215 220
 Glu Gly Phe Lys Lys Lys Tyr Glu Glu Met Asn Ala Glu Ile Ser Gln
 225 230 235 240
 Phe Lys Arg Met Ile Asp Thr Thr Lys Asn Asp Asp Thr Pro Trp Ile
 245 250 255
 Ala Arg Thr Leu Asp Asn Leu Ala Asp Glu Leu Thr Ala Ile Leu Ser
 260 265 270
 Ala Pro Ala Lys Leu Ile Gly His Gly Val Lys Gly Val Ser Ser Leu
 275 280 285
 Phe Lys Lys His Lys Leu Pro Phe
 290 295

<210> 507

<211> 153

<212> PRT

<213> Homo sapiens

<400> 507

Met Pro Arg Leu Pro Ala His Arg His Ile Pro Ser Phe Asn Pro Arg
 1 5 10 15
 Gly Trp Glu Pro Asn Lys Leu Trp Gln Thr Asp Val Thr His Ile Pro

| | | | | | |
|---|----|-----|----|-----|----|
| | 20 | | 25 | | 30 |
| Glu Phe Gly Lys Leu Arg Tyr Val His Val Ser Ile Asp Leu Ile Ser | | | | | |
| 35 | | 40 | | 45 | |
| Ala Asn Ala Leu Pro Gly Glu Ser Thr Gly Tyr Val Thr Lys His Leu | | | | | |
| 50 | | 55 | | 60 | |
| Leu Leu Thr Phe Ala Phe Met Gly Gln Pro Thr Lys Ile Lys Thr Asn | | | | | |
| 65 | | 70 | | 75 | 80 |
| Asn Asp Leu Ala Tyr Ala Ser Ser Gln Phe Gln Gln Phe Cys His Met | | | | | |
| | 85 | | 90 | | 95 |
| Trp Asn Ile Gln His Ser Thr Gly Ile Pro Tyr Asn Pro Gln Gly Gln | | | | | |
| 100 | | 105 | | 110 | |
| Ala Ile Val Glu Cys Ala His Ser Thr Leu Lys Asn Met Leu Lys Lys | | | | | |
| 115 | | 120 | | 125 | |
| Gln Lys Arg Gly Val Trp Val Arg Thr Leu Gln His Tyr Trp His Lys | | | | | |
| 130 | | 135 | | 140 | |
| Pro Tyr Leu Pro Leu Ile Phe Lys Ile | | | | | |
| 145 | | 150 | | | |

<210> 508

<211> 562

<212> PRT

<213> Homo sapiens

<400> 508

| | | | |
|---|----|----|----|
| Met Leu Asp Thr Ile Ala Arg Ala Leu Gln Asp Leu Gly Arg Gln Val | | | |
| 1 | 5 | 10 | 15 |
| Leu Pro Thr Leu Pro Ser Leu Ser Gln Glu Glu Val Ser Ile Ile Trp | | | |
| 20 | 25 | 30 | |

出証特 2 0 0 4 - 3 0 5 9 6 6 2

260 265 270
Asp Gln Glu Ala Leu Phe Arg His Gln Met Lys Ser Leu Ala Thr Arg
275 280 285
Glu Gln Asn Gln Lys Asn Ala Ala Tyr Asn Leu Gly Val Ala Glu Ala
290 295 300
Ile Arg Asn His Lys Asn Glu Lys Pro Glu Phe Tyr Lys Ser Phe Leu
305 310 315 320
Phe Asp Lys Arg Pro Leu Ser Pro Ala Leu Asn Ala Leu Lys Gln Glu
325 330 335
Glu Tyr Ser Arg Ser Leu Leu Lys Gln Met Asp Asn Arg Gln Glu Asn
340 345 350
Glu Ile Lys Gln Arg Gln Tyr Arg Glu Leu Met Asp Arg Leu Glu Gln
355 360 365
Val Gln Leu Thr Glu Glu Leu Ala Ala Gln Arg Ala Lys Phe Leu Lys
370 375 380
Asp Lys Met Glu Glu Thr Gln Cys Tyr Lys Arg Ala Leu Asp Ala Gln
385 390 395 400
Ile Lys Asn Lys Pro Ser Arg Leu Pro Pro Phe Glu Pro Asp Ser Ser
405 410 415
Glu Pro Ile Phe Gly Lys Asn Glu Gly Glu Leu Met Val Glu Lys Gln
420 425 430
Lys Arg Glu Gln Asn Tyr Met Lys His Gln Leu Glu Ala Ala Ala Asn
435 440 445
His Lys Arg Lys Ala Ile Leu His Gln Leu Val Asp Gln Arg Arg Asp
450 455 460
Leu Gln Met Leu Gln Arg Thr Gln Arg Glu His Leu Ala Asp Arg Thr
465 470 475 480
Ala Glu Leu Glu Arg Val Asn Arg Val Asn Gln Cys Leu Gln Glu Asp
485 490 495

Trp Glu Arg Ser Ala Ala Met Lys Lys Gln Arg Asp Leu Glu Asp Lys
 500 505 510
 Ala Phe Glu Arg Ala Ser Asp Lys Leu Phe Leu Leu Asp Gln Cys Glu
 515 520 525
 Lys Tyr Arg Arg Cys Lys Gln Cys Gln Arg Arg Thr Ser Asn Val Gly
 530 535 540
 Glu Ser Asn Leu Trp Pro Leu Asn Lys Phe Leu Pro Gly Ser Arg Leu
 545 550 555 560
 Leu Val

<210> 509

<211> 385

<212> PRT

<213> Homo sapiens

<400> 509

Met Pro Lys Lys Leu Leu Leu Leu Pro Pro Pro Ser Ala Ser Ser Ala
 1 5 10 15
 Phe Arg Val Pro Arg Ala Arg Pro Val Pro Pro Pro Ala Met Asn Ala
 20 25 30
 Ala Arg Thr Gly Tyr Arg Val Phe Ser Ala Asn Ser Thr Ala Ala Cys
 35 40 45
 Thr Glu Leu Ala Lys Arg Ile Thr Glu Arg Leu Gly Ala Glu Leu Gly
 50 55 60
 Lys Ser Val Val Tyr Gln Glu Thr Asn Gly Glu Thr Arg Val Glu Ile
 65 70 75 80
 Lys Glu Ser Val Arg Gly Gln Asp Ile Phe Ile Ile Gln Thr Ile Pro

| | | |
|---|-----|-----|
| 85 | 90 | 95 |
| Arg Asp Val Asn Thr Ala Val Met Glu Leu Leu Ile Met Ala Tyr Ala | | |
| 100 | 105 | 110 |
| Leu Lys Thr Ala Cys Ala Arg Asn Ile Ile Gly Val Ile Pro Tyr Phe | | |
| 115 | 120 | 125 |
| Pro Tyr Ser Lys Gln Ser Lys Met Arg Lys Arg Gly Ser Ile Val Cys | | |
| 130 | 135 | 140 |
| Lys Leu Leu Ala Ser Met Leu Ala Lys Ala Gly Leu Thr His Ile Ile | | |
| 145 | 150 | 155 |
| 160 | | |
| Thr Met Asp Leu His Gln Lys Glu Ile Gln Gly Phe Phe Ser Phe Pro | | |
| 165 | 170 | 175 |
| Val Asp Asn Leu Arg Ala Ser Pro Phe Leu Leu Gln Tyr Ile Gln Glu | | |
| 180 | 185 | 190 |
| Glu Ile Pro Asn Tyr Arg Asn Ala Val Ile Val Ala Lys Ser Pro Asp | | |
| 195 | 200 | 205 |
| Ala Ala Lys Arg Ala Gln Ser Tyr Ala Glu Arg Leu Arg Leu Gly Leu | | |
| 210 | 215 | 220 |
| Ala Val Ile His Gly Glu Ala Gln Cys Thr Glu Leu Asp Met Asp Asp | | |
| 225 | 230 | 235 |
| 240 | | |
| Gly Arg His Ser Pro Pro Met Val Lys Asn Ala Thr Val His Pro Gly | | |
| 245 | 250 | 255 |
| Leu Glu Leu Pro Leu Met Met Ala Lys Glu Lys Pro Pro Ile Thr Val | | |
| 260 | 265 | 270 |
| Val Gly Asp Val Gly Gly Arg Ile Ala Ile Ile Val Asp Tyr Ile Ile | | |
| 275 | 280 | 285 |
| Asp Asp Val Glu Ser Phe Val Ala Ala Ala Glu Ile Leu Lys Glu Arg | | |
| 290 | 295 | 300 |
| Gly Ala Tyr Lys Ile Tyr Val Met Ala Thr His Gly Ile Leu Ser Ala | | |
| 305 | 310 | 315 |
| 320 | | |

Glu Ala Pro Arg Leu Ile Glu Glu Ser Ser Val Asp Glu Val Val Val

325

330

335

Thr Asn Thr Val Pro His Glu Val Gln Lys Leu Gln Cys Pro Lys Ile

340

345

350

Lys Thr Val Asp Ile Ser Leu Ile Leu Ser Glu Ala Ile Arg Arg Ile

355

360

365

His Asn Gly Glu Ser Met Ala Tyr Leu Phe Arg Asn Ile Thr Val Asp

370

375

380

Asp

385

<210> 510

<211> 621

<212> PRT

<213> Homo sapiens

<400> 510

Met Asp Leu Leu Thr Arg Glu Asn Val Ala Leu Lys Val Glu Ser Ala

1

5

10

15

Gln Gln Pro Lys Gln Val Leu Lys Met Glu Val Ala Val Leu Lys Lys

20

25

30

Leu Gln Gly Lys Asp His Val Cys Arg Phe Ile Gly Cys Gly Arg Asn

35

40

45

Glu Lys Phe Asn Tyr Val Val Met Gln Leu Gln Gly Arg Asn Leu Ala

50

55

60

Asp Leu Arg Arg Ser Gln Pro Arg Gly Thr Phe Thr Leu Ser Thr Thr

65

70

75

80

Leu Arg Leu Gly Lys Gln Ile Leu Glu Ser Ile Glu Ala Ile His Ser

| | | | |
|---|-----|-----|-----|
| | 85 | 90 | 95 |
| Val Gly Phe Leu His Arg Asp Ile Lys Pro Ser Asn Phe Ala Met Gly | | | |
| | 100 | 105 | 110 |
| Arg Leu Pro Ser Thr Tyr Arg Lys Cys Tyr Met Leu Asp Phe Gly Leu | | | |
| | 115 | 120 | 125 |
| Ala Arg Gln Tyr Thr Asn Thr Thr Gly Asp Val Arg Pro Pro Arg Asn | | | |
| | 130 | 135 | 140 |
| Val Ala Gly Phe Arg Gly Thr Val Arg Tyr Ala Ser Val Asn Ala His | | | |
| 145 | 150 | 155 | 160 |
| Lys Asn Arg Glu Met Gly Arg His Asp Asp Leu Trp Ser Leu Phe Tyr | | | |
| | 165 | 170 | 175 |
| Met Leu Val Glu Phe Ala Val Gly Gln Leu Pro Trp Arg Lys Ile Lys | | | |
| | 180 | 185 | 190 |
| Asp Lys Glu Gln Val Gly Met Ile Lys Glu Lys Tyr Glu His Arg Met | | | |
| | 195 | 200 | 205 |
| Leu Leu Lys His Met Pro Ser Glu Phe His Leu Phe Leu Asp His Ile | | | |
| | 210 | 215 | 220 |
| Ala Ser Leu Asp Tyr Phe Thr Lys Pro Asp Tyr Gln Leu Ile Met Ser | | | |
| 225 | 230 | 235 | 240 |
| Val Phe Glu Asn Ser Met Lys Glu Arg Gly Ile Ala Glu Asn Glu Ala | | | |
| | 245 | 250 | 255 |
| Phe Asp Trp Glu Lys Ala Gly Thr Asp Ala Leu Leu Ser Thr Ser Thr | | | |
| | 260 | 265 | 270 |
| Ser Thr Pro Pro Gln Gln Asn Thr Arg Gln Thr Ala Ala Met Phe Gly | | | |
| | 275 | 280 | 285 |
| Val Val Asn Val Thr Pro Val Pro Gly Asp Leu Leu Arg Glu Asn Thr | | | |
| | 290 | 295 | 300 |
| Glu Asp Val Leu Gln Gly Glu His Leu Ser Asp Gln Glu Asn Ala Pro | | | |
| 305 | 310 | 315 | 320 |

Pro Ile Leu Pro Gly Arg Pro Ser Glu Gly Leu Gly Pro Ser Pro His
325 330 335
Leu Val Pro His Pro Gly Gly Pro Glu Ala Glu Val Trp Glu Gly Thr
340 345 350
Asp Val Asn Arg Asn Lys Leu Arg Ile Asn Ile Gly Lys Ser Pro Cys
355 360 365
Val Glu Glu Glu Gln Ser Arg Gly Met Gly Val Pro Ser Ser Pro Val
370 375 380
Arg Ala Pro Pro Asp Ser Pro Thr Thr Pro Val Arg Ser Leu Arg Tyr
385 390 395 400
Arg Arg Val Asn Ser Pro Glu Ser Glu Arg Leu Ser Thr Ala Asp Gly
405 410 415
Arg Val Glu Leu Pro Glu Arg Arg Ser Arg Met Asp Leu Pro Gly Ser
420 425 430
Pro Ser Arg Gln Ala Cys Ser Ser Gln Pro Ala Gln Met Leu Ser Val
435 440 445
Asp Thr Gly His Ala Asp Arg Gln Ala Ser Gly Arg Met Asp Val Ser
450 455 460
Ala Ser Val Glu Gln Glu Ala Leu Ser Asn Ala Phe Arg Ser Val Pro
465 470 475 480
Leu Ala Glu Glu Glu Asp Phe Asp Ser Lys Glu Trp Val Ile Ile Asp
485 490 495
Lys Glu Thr Glu Leu Lys Asp Phe Pro Pro Gly Ala Glu Pro Ser Thr
500 505 510
Ser Gly Thr Thr Asp Glu Glu Pro Glu Glu Leu Arg Pro Leu Pro Glu
515 520 525
Glu Gly Glu Glu Arg Arg Arg Leu Gly Ala Glu Pro Phe Pro Leu Thr
530 535 540
Pro Ala Leu Gly Thr Pro Pro Ser Thr Glu Arg Val Gly Pro His Arg

545 550 555 560
 Pro Thr Glu Thr Val Gly Gly Gly Gln Thr Leu Gly Ala Leu Pro Pro
 565 570 575
 Ala Val Gln Pro Pro Ala Thr Thr Gly Val Leu Arg Val Leu Leu Leu
 580 585 590
 His Ala Gly Asp Gly Ala Leu Pro Ser Pro Arg Arg Arg Arg Leu Leu
 595 600 605
 Gly Leu Leu Arg Phe Pro His Ser Ala Gln Pro Leu Gly
 610 615 620

<210> 511

<211> 267

<212> PRT

<213> Homo sapiens

<400> 511

Met Phe Arg Arg Lys Ala Glu Gly Leu Asp Leu Ala Ser Cys Val Arg
 1 5 10 15
 Ser Leu Asp Val Leu Val Leu Asp Glu Ala Asp Arg Leu Leu Asp Met
 20 25 30
 Gly Phe Glu Ala Ser Ile Asn Thr Ile Leu Glu Phe Leu Pro Lys Gln
 35 40 45
 Arg Arg Thr Gly Leu Phe Ser Ala Thr Gln Thr Gln Glu Val Glu Asn
 50 55 60
 Leu Val Arg Ala Gly Leu Arg Asn Pro Val Arg Val Ser Val Lys Glu
 65 70 75 80
 Lys Gly Val Ala Ala Ser Ser Ala Gln Lys Thr Pro Ser Arg Leu Glu
 85 90 95

Asn Tyr Tyr Met Val Cys Lys Ala Asp Glu Lys Phe Asn Gln Leu Val
100 105 110
His Phe Leu Arg Asn His Lys Gln Glu Lys His Leu Val Phe Phe Ser
115 120 125
Thr Cys Ala Cys Val Glu Tyr Tyr Gly Lys Ala Leu Glu Val Leu Val
130 135 140
Lys Gly Val Lys Ile Met Cys Ile His Gly Lys Met Lys Tyr Lys Arg
145 150 155 160
Asn Lys Ile Phe Met Glu Phe Arg Lys Leu Gln Ser Gly Ile Leu Val
165 170 175
Cys Thr Asp Val Met Ala Arg Gly Ile Asp Ile Pro Glu Val Asn Trp
180 185 190
Val Leu Gln Tyr Asp Pro Pro Ser Asn Ala Ser Ala Phe Val His Arg
195 200 205
Cys Gly Arg Thr Ala Arg Ile Gly His Gly Gly Ser Ala Leu Val Phe
210 215 220
Leu Leu Pro Met Glu Glu Ser Tyr Ile Asn Phe Leu Ala Ile Ser Gln
225 230 235 240
Lys Val Ser Cys Arg Pro Phe Ser Asp Arg Met Pro Ser Asp Gly Val
245 250 255
Ala Gly Lys Val Leu Gln His Val Val Ser Asn
260 265

<210> 512

<211> 700

<212> PRT

<213> Homo sapiens

<400> 512

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Ser | Asp | Asp | His | Val | Asn | Glu | Ile | Ile | Ile | Gln | Lys | Leu | Ile |
| 1 | | | | | 5 | | | | 10 | | | | | 15 | |
| Ala | Ser | Leu | Ile | Pro | Met | Thr | Ser | Arg | Asp | Arg | Ile | Lys | Ala | Ile | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asn | Gln | Pro | Arg | Thr | Met | Glu | Glu | Lys | Arg | Asn | Leu | Ser | Arg | Gly | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Thr | Ile | Thr | Thr | Glu | Asp | Glu | Gly | Arg | Ala | Lys | Ala | His | Leu | Thr |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Trp | Lys | Ile | Val | Asp | Lys | Glu | Lys | Ser | Lys | Gln | Thr | His | Arg | Ile |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Gln | Leu | Asn | Cys | Cys | Ile | Gln | Cys | Leu | Asn | Ser | Ile | Ser | Arg | Ala |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Tyr | Arg | Arg | Ser | Lys | Asn | Ser | Leu | Ser | Glu | Ile | Leu | Asn | Ser | Ile | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Trp | Gln | Lys | Thr | Leu | Lys | Ile | Ile | Gly | Gly | Lys | Phe | Gly | Thr | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Val | Leu | Ser | Tyr | Phe | Asn | Phe | Leu | Arg | Trp | Leu | Leu | Lys | Phe | Asn | Ile |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Phe | Ser | Phe | Ile | Leu | Asn | Phe | Ser | Phe | Ile | Ile | Ile | Pro | Gln | Phe | Thr |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | |
| Val | Ala | Lys | Lys | Asn | Thr | Leu | Gln | Phe | Thr | Gly | Leu | Glu | Phe | Phe | Thr |
| | | | 165 | | | | | 170 | | | | 175 | | | |
| Gly | Val | Gly | Tyr | Phe | Arg | Asp | Thr | Val | Met | Tyr | Tyr | Gly | Phe | Tyr | Thr |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Asn | Ser | Thr | Ile | Gln | His | Gly | Asn | Ser | Gly | Ala | Ser | Tyr | Asn | Met | Gln |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Ala | Tyr | Ile | Phe | Thr | Ile | Gly | Ala | Cys | Leu | Thr | Thr | Cys | Phe | Phe |
| | 210 | | | | | | 215 | | | | 220 | | | | |

Ser Leu Leu Phe Ser Met Ala Lys Tyr Phe Arg Asn Asn Phe Ile Asn
225 230 235 240
Pro His Ile Tyr Ser Gly Gly Ile Thr Lys Leu Ile Phe Cys Trp Asp
245 250 255
Phe Thr Val Thr His Glu Lys Ala Val Lys Leu Lys Gln Lys Asn Leu
260 265 270
Ser Thr Glu Ile Arg Glu Asn Leu Ser Glu Leu Arg Gln Glu Asn Ser
275 280 285
Lys Leu Thr Phe Asn Gln Leu Leu Thr Arg Phe Ser Ala Tyr Met Val
290 295 300
Ala Trp Val Val Ser Thr Gly Val Ala Ile Ala Cys Cys Ala Ala Val
305 310 315 320
Tyr Tyr Leu Ala Glu Tyr Asn Leu Glu Phe Leu Lys Thr His Ser Asn
325 330 335
Pro Gly Ala Val Leu Leu Leu Pro Phe Val Val Ser Cys Ile Asn Leu
340 345 350
Ala Val Pro Cys Ile Tyr Ser Met Phe Arg Leu Val Glu Arg Tyr Glu
355 360 365
Met Pro Arg His Glu Val Tyr Val Leu Leu Ile Arg Asn Ile Phe Leu
370 375 380
Lys Ile Ser Ile Ile Gly Ile Leu Cys Tyr Tyr Trp Leu Asn Thr Val
385 390 395 400
Ala Leu Ser Gly Glu Glu Cys Trp Gly Thr Leu Ile Gly Gln Asp Ile
405 410 415
Tyr Arg Leu Leu Leu Met Asp Phe Val Phe Ser Leu Val Asn Ser Phe
420 425 430
Leu Gly Glu Phe Leu Arg Arg Ile Ile Gly Met Gln Leu Ile Thr Ser
435 440 445
Leu Gly Leu Gln Glu Phe Asp Ile Ala Arg Asn Val Leu Glu Leu Ile

450 455 460
Tyr Ala Gln Thr Leu Val Trp Ile Gly Ile Phe Phe Arg Pro Leu Leu
465 470 475 480
Pro Phe Ile Gln Met Ile Met Leu Phe Ile Met Phe Tyr Ser Lys Asn
485 490 495
Ile Ser Leu Met Met Asn Phe Gln Pro Pro Ser Lys Ala Trp Arg Ala
500 505 510
Ser Gln Met Met Thr Phe Phe Ile Phe Leu Leu Phe Phe Pro Ser Phe
515 520 525
Thr Gly Val Leu Cys Thr Leu Ala Ile Thr Ile Trp Arg Leu Lys Pro
530 535 540
Ser Ala Asp Cys Gly Pro Phe Arg Gly Leu Pro Leu Phe Ile His Ser
545 550 555 560
Ile Tyr Ser Trp Ile Asp Thr Leu Ser Thr Arg Pro Gly Tyr Leu Trp
565 570 575
Val Val Trp Ile Tyr Arg Asn Leu Ile Gly Ser Val His Phe Phe Phe
580 585 590
Ile Leu Thr Leu Ile Val Leu Ile Ile Thr Tyr Leu Tyr Trp Gln Ile
595 600 605
Thr Glu Gly Arg Lys Ile Met Ile Arg Leu Leu His Glu Gln Ile Ile
610 615 620
Asn Glu Gly Lys Asp Lys Met Phe Leu Ile Glu Lys Leu Ile Lys Leu
625 630 635 640
Gln Asp Met Glu Lys Lys Ala Asn Pro Ser Ser Leu Val Leu Glu Arg
645 650 655
Arg Glu Val Glu Gln Gln Gly Phe Cys Ile Trp Gly Asn Met Met Ala
660 665 670
Val Leu Thr Cys Asp Leu Glu Asp Gln Phe Lys Lys Ala Ile Gln Gly
675 680 685

Pro Asp Asp Ser Phe Gly Asn Gln Thr Pro Ile Lys
 690 695 700

<210> 513

<211> 174

<212> PRT

<213> Homo sapiens

<400> 513

Met Ile Ser Asn Leu Ser Trp Glu Leu Pro Gly Ser Leu Pro Leu Ile
 1 5 10 15
 Ser Val Pro Tyr Ser Met His Cys Cys Thr Leu Gly Phe Leu Ser Cys
 20 25 30
 Ser Leu Phe Leu His Met Ser Phe Glu Leu Lys Leu Leu Leu Leu Leu
 35 40 45
 Leu Trp Leu Ala Ala Ser Cys Ser Leu Phe Leu His Ser His Ala Trp
 50 55 60
 Leu Ser Glu Cys Leu Ile Val Arg Leu Tyr Leu Gly Pro Leu Asp Ser
 65 70 75 80
 Arg Pro Gly Val Leu Lys Glu Pro Lys Leu Met Gly Ala Ile Ser Phe
 85 90 95
 Phe Ile Phe Phe Phe Thr Leu Leu Val Leu Ala Arg Gln Asn Glu Tyr
 100 105 110
 Tyr Cys Arg Leu Asp Phe Leu Trp Lys Lys Lys Leu Arg Gln Glu Arg
 115 120 125
 Glu Glu Thr Glu Thr Met Glu Asn Leu Thr Arg Leu Leu Leu Glu Asn
 130 135 140
 Val Leu Pro Ala His Val Ala Pro Gln Phe Ile Gly Gln Asn Arg Arg

145 150 155 160
 Asn Glu Ser Pro Val Pro Pro Gly Ser Leu Pro Pro Val Leu
 165 170

<210> 514

<211> 546

<212> PRT

<213> Homo sapiens

<400> 514

Met Ile His Thr Thr Glu Lys Pro Tyr Arg Cys Asn Glu Ser Gly Lys
 1 5 10 15
 Ala Phe His Arg Gly Ser Leu Leu Thr Val His Gln Ile Val His Thr
 20 25 30
 Arg Gly Lys Pro Tyr Gln Cys Asp Val Cys Gly Arg Ile Phe Arg Gln
 35 40 45
 Asn Ser Asp Leu Val Asn His Arg Arg Ser His Thr Gly Asp Lys Pro
 50 55 60
 Tyr Ile Cys Asn Glu Cys Gly Lys Ser Phe Ser Lys Ser Ser His Leu
 65 70 75 80
 Ala Val His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
 85 90 95
 Arg Cys Gly Lys Cys Phe Ser Gln Ser Ser Ser Leu Ala Thr His Gln
 100 105 110
 Thr Val His Thr Gly Asp Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys
 115 120 125
 Thr Phe Lys Arg Asn Ser Ser Leu Thr Ala His His Ile Ile His Ala
 130 135 140

Gly Lys Lys Pro Tyr Thr Cys Asp Val Cys Gly Lys Val Phe Tyr Gln
 145 150 155 160
 Asn Ser Gln Leu Val Arg His Gln Ile Ile His Thr Gly Glu Thr Pro
 165 170 175
 Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Phe Gln Arg Ser Arg Leu
 180 185 190
 Ala Gly His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
 195 200 205
 Glu Cys Gly Lys Val Phe Ser Gln His Ser His Leu Ala Val His Gln
 210 215 220
 Arg Val His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys
 225 230 235 240
 Ala Phe Asn Trp Gly Ser Leu Leu Thr Val His Gln Arg Ile His Thr
 245 250 255
 Gly Glu Lys Pro Tyr Lys Cys Asn Val Cys Gly Lys Val Phe Asn Tyr
 260 265 270
 Gly Gly Tyr Leu Ser Val His Met Arg Cys His Thr Gly Glu Lys Pro
 275 280 285
 Leu His Cys Asn Lys Cys Gly Met Val Phe Thr Tyr Tyr Ser Cys Leu
 290 295 300
 Ala Arg His Gln Arg Met His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
 305 310 315 320
 Val Cys Gly Lys Val Phe Ile Asp Ser Gly Asn Leu Ser Ile His Arg
 325 330 335
 Arg Ser His Thr Gly Glu Lys Pro Phe Gln Cys Asn Glu Cys Gly Lys
 340 345 350
 Val Phe Ser Tyr Tyr Ser Cys Leu Ala Arg His Arg Lys Ile His Thr
 355 360 365
 Gly Glu Lys Pro Tyr Lys Cys Asn Asp Cys Gly Lys Ala Tyr Thr Gln

| | | |
|---|-----|-----|
| 370 | 375 | 380 |
| Arg Ser Ser Leu Thr Lys His Leu Val Ile His Thr Gly Glu Asn Pro | | |
| 385 | 390 | 395 |
| Tyr His Cys Asn Glu Phe Gly Glu Ala Phe Ile Gln Ser Ser Lys Leu | | |
| 405 | 410 | 415 |
| Ala Arg Tyr His Arg Asn Pro Thr Gly Glu Lys Pro His Lys Cys Ser | | |
| 420 | 425 | 430 |
| Glu Cys Gly Arg Thr Phe Ser His Lys Thr Ser Leu Val Tyr His Gln | | |
| 435 | 440 | 445 |
| Arg Arg His Thr Gly Glu Met Pro Tyr Lys Cys Ile Glu Cys Gly Lys | | |
| 450 | 455 | 460 |
| Val Phe Asn Ser Thr Thr Thr Leu Ala Arg His Arg Arg Ile His Thr | | |
| 465 | 470 | 475 |
| Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Arg Tyr | | |
| 485 | 490 | 495 |
| Arg Ser Gly Leu Ala Arg His Trp Ser Ile His Thr Gly Glu Lys Pro | | |
| 500 | 505 | 510 |
| Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Arg Val Arg Ser Ile Leu | | |
| 515 | 520 | 525 |
| Leu Asn His Gln Met Met His Thr Gly Glu Lys Pro Tyr Lys Cys Asn | | |
| 530 | 535 | 540 |
| Glu Cys | | |
| 545 | | |

<210> 515

<211> 113

<212> PRT

<213> Homo sapiens

<400> 515

Met Met His Leu Gln Pro Ala Trp Ser Ser Phe Gly Gln Ser Gly Pro
 1 5 10 15
 Ile Leu Met Arg Ser Gly Gly Met Gln Leu Leu Leu Leu Pro His Gly
 20 25 30
 Ser Val Arg Pro Asn Gln Pro Ala Leu Ser Pro Leu Pro Ala Val Tyr
 35 40 45
 Gln Val Ala Leu Glu Arg Gly His Pro Glu Gly Thr Thr Cys Ala Ala
 50 55 60
 Val Gly Gly Gly Lys Ile Asn Arg Pro Arg Thr Pro Gly Gln Ala Gly
 65 70 75 80
 Ala Thr Glu Glu Val Ser Ser Lys Gly Gly Lys Leu Ser Gly Leu Phe
 85 90 95
 Leu Thr Ile Leu Pro Val Pro Arg Pro Trp Thr Ala Gly Gln Pro Gln
 100 105 110
 Ser

<210> 516

<211> 129

<212> PRT

<213> Homo sapiens

<400> 516

Met Met Thr Asp Leu Lys Gln Ser His Ser Val Arg Leu Asn Asp Gly
 1 5 10 15
 Pro Phe Met Pro Val Leu Gly Phe Gly Thr Tyr Ala Pro Asp His Thr

20 25 30
 Pro Lys Ser Gln Ala Ala Glu Ala Thr Lys Val Ala Ile Asp Val Gly
 35 40 45
 Phe Arg His Ile Asp Ser Ala Tyr Leu Tyr Gln Asn Glu Glu Glu Val
 50 55 60
 Gly Gln Ala Ile Trp Glu Lys Ile Ala Asp Gly Thr Val Lys Arg Glu
 65 70 75 80
 Glu Ile Phe Tyr Thr Ile Lys Leu Trp Ala Thr Phe Phe Arg Ala Glu
 85 90 95
 Leu Val His Pro Ala Leu Glu Arg Ser Leu Lys Lys Leu Gly Pro Asp
 100 105 110
 Tyr Val Asp Leu Phe Ile Ile His Val Pro Phe Ala Met Lys Gly Ser
 115 120 125
 Ser

<210> 517

<211> 105

<212> PRT

<213> Homo sapiens

<400> 517

Met Cys Pro Val Cys Gly Arg Ala Leu Ser Ser Pro Gly Ser Leu Gly
 1 5 10 15
 Arg His Leu Leu Ile His Ser Glu Asp Gln Arg Ser Asn Cys Ala Val
 20 25 30
 Cys Gly Ala Arg Phe Thr Ser His Ala Thr Phe Asn Arg Ser Ala Gly
 35 40 45

His Leu Ser Leu Leu Cys Trp Glu Gln Ile Thr Gly Cys Glu Phe Cys
 50 55 60
 Phe Leu Lys Ser Lys Arg Arg Leu Glu Ile Gly Asn Ala Lys Ala Ala
 65 70 75 80
 Asp Ala Cys Ser Leu Glu Val Gln Val Arg Arg Leu Gly Asn Met Pro
 85 90 95
 Ile Pro Ser His Ser Pro Lys Gly Lys
 100 105

<210> 518

<211> 646

<212> PRT

<213> Homo sapiens

<400> 518

Met Phe Leu Ser Ile Ser Thr Arg Leu Pro Ser Gln Tyr Ile Tyr Gly
 1 5 10 15
 Phe Gly Glu Thr Glu His Thr Thr Phe Arg Arg Asn Met Asn Trp Asn
 20 25 30
 Thr Trp Gly Met Phe Ala His Asp Glu Pro Pro Ala Tyr Lys Lys Asn
 35 40 45
 Ser Tyr Gly Val His Pro Tyr Tyr Met Ala Leu Glu Glu Asp Gly Ser
 50 55 60
 Ala His Gly Val Leu Leu Leu Asn Ser Asn Ala Met Asp Val Thr Leu
 65 70 75 80
 Gln Pro Thr Pro Ala Leu Thr Tyr Arg Thr Thr Gly Gly Ile Leu Asp
 85 90 95
 Phe Tyr Ile Val Leu Gly Pro Thr Pro Glu Leu Val Thr Gln Gln Tyr

100 105 110
Thr Glu Leu Ile Gly Arg Pro Ala Met Ile Pro Tyr Trp Ala Leu Gly
115 120 125
Phe His Leu Ser Arg Tyr Gly Tyr Gln Asn Asp Ala Glu Ile Ser Ser
130 135 140
Leu Tyr Asp Ala Met Val Ala Ala Gln Ile Pro Tyr Asp Val Gln His
145 150 155 160
Val Asp Ile Asp Tyr Met Asn Arg Lys Leu Asp Phe Thr Leu Ser Ala
165 170 175
Asn Phe Gln Asn Leu Ser Leu Leu Ile Glu Gln Met Lys Lys Asn Gly
180 185 190
Met Arg Phe Ile Leu Ile Leu Asp Pro Ala Ile Ser Gly Asn Glu Thr
195 200 205
Gln Tyr Leu Pro Phe Ile Arg Gly Gln Glu Asn Asn Val Phe Ile Lys
210 215 220
Trp Pro Asp Thr Asn Asp Ile Val Trp Gly Lys Val Trp Pro Asp Leu
225 230 235 240
Pro Asn Val Ile Val Asp Gly Ser Leu Asp His Glu Thr Gln Val Lys
245 250 255
Leu Tyr Arg Ala Tyr Val Ala Phe Pro Asp Phe Phe Arg Asn Ser Thr
260 265 270
Ala Ala Trp Trp Lys Lys Glu Ile Glu Glu Leu Tyr Ala Asn Pro Arg
275 280 285
Glu Pro Glu Lys Ser Leu Lys Phe Asp Gly Leu Trp Ile Asp Met Asn
290 295 300
Glu Pro Ser Asn Phe Val Asp Gly Ser Val Arg Gly Cys Ser Asn Glu
305 310 315 320
Met Leu Asn Asn Pro Pro Tyr Met Pro Tyr Leu Glu Ser Arg Asp Lys
325 330 335

Gly Leu Ser Ser Lys Thr Leu Cys Met Glu Ser Gln Gln Ile Leu Pro
 340 345 350
 Asp Ser Ser Pro Val Glu His Tyr Asn Val His Asn Leu Tyr Gly Trp
 355 360 365
 Ser Gln Thr Arg Pro Thr Tyr Glu Ala Val Gln Glu Val Thr Gly Gln
 370 375 380
 Arg Gly Val Ile Ile Thr Arg Ser Thr Phe Pro Ser Ser Gly Arg Trp
 385 390 395 400
 Gly Gly His Arg Leu Gly Asn Asn Thr Ala Ala Trp Asp Gln Leu Gly
 405 410 415
 Lys Ser Ile Ile Gly Met Met Glu Phe Ser Leu Phe Gly Ile Pro Tyr
 420 425 430
 Thr Gly Ala Asp Ile Cys Gly Phe Phe Gly Asp Ala Glu Tyr Glu Met
 435 440 445
 Cys Val Arg Trp Met Gln Leu Gly Ala Phe Tyr Pro Phe Ser Arg Asn
 450 455 460
 His Asn Asn Ile Gly Thr Arg Arg Gln Asp Pro Val Ala Trp Asn Ser
 465 470 475 480
 Thr Phe Glu Met Leu Ser Arg Lys Val Leu Glu Thr Arg Tyr Thr Leu
 485 490 495
 Leu Pro Tyr Leu Tyr Thr Leu Met His Lys Ala His Val Glu Gly Ser
 500 505 510
 Thr Val Val Arg Pro Leu Leu His Glu Phe Thr Asp Asp Arg Thr Thr
 515 520 525
 Trp Asp Ile Asp Arg Gln Phe Met Leu Gly Pro Ala Ile Leu Ile Ser
 530 535 540
 Pro Val Leu Glu Thr Ser Thr Phe Glu Ile Ser Ala Tyr Phe Pro Arg
 545 550 555 560
 Ala Arg Trp Tyr Asp Tyr Ser Thr Gly Thr Ser Ser Thr Ser Thr Gly

| | | |
|---|-----|-----|
| 565 | 570 | 575 |
| Gln Arg Lys Ile Leu Lys Ala Pro Leu Asp His Ile Asn Leu His Val | | |
| 580 | 585 | 590 |
| Arg Gly Gly Tyr Ile Leu Pro Trp Gln Glu Pro Ala Met Asn Thr His | | |
| 595 | 600 | 605 |
| Ser Ser Arg Gln Asn Phe Met Gly Leu Ile Val Ala Leu Asp Asp Asn | | |
| 610 | 615 | 620 |
| Gly Thr Ala Glu Gly Gln Val Phe Trp Asp Asp Gly Gln Ser Ile Val | | |
| 625 | 630 | 635 |
| | | 640 |
| Phe Asn Thr Thr Ala Met | | |
| 645 | | |

<210> 519

<211> 472

<212> PRT

<213> Homo sapiens

<400> 519

| |
|---|
| Met Ala Ser Pro Pro Arg Cys Ser Pro Thr Ala His Asp Arg Glu Cys |
| 1 5 10 15 |
| Lys Leu Pro Pro Pro Ser Ala Pro Ala Ser Glu Tyr Cys Pro Gly Lys |
| 20 25 30 |
| Leu Ser Trp Gly Thr Met Ala Arg Ala Leu Gly Arg Phe Lys Leu Ser |
| 35 40 45 |
| Ile Pro His Thr His Leu Leu Ala Thr Leu Asp Pro Leu Ala Leu Asp |
| 50 55 60 |
| Arg Glu Pro Pro Pro His Leu Leu Pro Glu Lys His Gln Val Pro Glu |
| 65 70 75 80 |

Lys Leu Ile Trp Gly Asp Gln Asp Pro Leu Ser Lys Ile Pro Phe Lys
 85 90 95
 Ile Leu Ser Gly His Glu His Ala Val Ser Thr Cys His Phe Cys Val
 100 105 110
 Asp Asp Thr Lys Leu Leu Ser Gly Ser Tyr Asp Cys Thr Val Lys Leu
 115 120 125
 Trp Asp Pro Val Asp Gly Ser Val Val Arg Asp Phe Glu His Arg Pro
 130 135 140
 Lys Ala Pro Val Val Glu Cys Ser Ile Thr Gly Asp Ser Ser Arg Val
 145 150 155 160
 Ile Ala Ala Ser Tyr Asp Lys Thr Val Arg Ala Trp Asp Leu Glu Thr
 165 170 175
 Gly Lys Leu Leu Trp Lys Val Arg Tyr Asp Thr Phe Ile Val Ser Cys
 180 185 190
 Lys Phe Ser Pro Asp Gly Lys Tyr Val Val Ser Gly Phe Asp Val Asp
 195 200 205
 His Gly Ile Cys Ile Met Asp Ala Glu Asn Ile Thr Thr Val Ser Val
 210 215 220
 Ile Lys Asp His His Thr Arg Ser Ile Thr Ser Cys Cys Phe Asp Pro
 225 230 235 240
 Asp Ser Gln Arg Val Ala Ser Val Ser Leu Asp Arg Cys Ile Lys Ile
 245 250 255
 Trp Asp Val Thr Ser Gln Ala Thr Leu Leu Thr Ile Thr Lys Ala His
 260 265 270
 Ser Asn Ala Ile Ser Asn Cys Cys Phe Thr Phe Ser Gly His Phe Leu
 275 280 285
 Cys Thr Ser Ser Trp Asp Lys Asn Leu Lys Ile Trp Asn Val His Thr
 290 295 300
 Gly Glu Phe Arg Asn Arg Gly Ala Cys Val Thr Leu Met Gln Gly His

305 310 315 320
Glu Gly Ser Val Ser Ser Cys His Phe Ala Arg Asp Ser Ser Phe Leu
 325 330 335
Ile Ser Gly Gly Phe Asp Arg Thr Val Ala Ile Trp Asp Val Ala Glu
 340 345 350
Gly Tyr Arg Lys Leu Ser Leu Lys Gly His Asn Asp Trp Val Met Asp
 355 360 365
Val Ala Ile Ser Asn Asn Lys Lys Trp Ile Leu Ser Ala Ser Lys Asp
 370 375 380
Arg Thr Met Arg Leu Trp Asn Ile Glu Glu Ile Asp Glu Ile Pro Leu
385 390 395 400
Val Ile Lys Tyr Lys Lys Ala Val Gly Leu Lys Leu Lys Gln Cys Glu
 405 410 415
Arg Cys Asp Arg Pro Phe Ser Ile Phe Lys Ser Asp Thr Ser Ser Glu
 420 425 430
Met Phe Thr Gln Cys Val Phe Cys Arg Ile Asp Thr Arg Gly Leu Pro
 435 440 445
Ala Asp Thr Ser Ser Ser Ser Ser Ser Ser Ser Glu Arg Glu Asn Ser Pro
 450 455 460
Pro Pro Arg Gly Ser Lys Asp Asp
465 470

<210> 520

<211> 466

<212> PRT

<213> Homo sapiens

<400> 520

Met Phe Val Gly Val Ala Arg His Ser Gly Ser Gln Asp Glu Val Ser
 1 5 10 15
 Arg Gly Val Glu Pro Leu Asp Ala Ala Arg Ala Gln Pro Ala Lys Asp
 20 25 30
 Arg Arg Ala Lys Gly Thr Pro Lys Ser Ser Lys Pro Gly Lys Lys His
 35 40 45
 Arg Tyr Leu Arg Leu Leu Pro Glu Ala Leu Ile Arg Phe Gly Gly Phe
 50 55 60
 Arg Lys Arg Lys Lys Ala Lys Ser Ser Val Ser Lys Lys Pro Gly Glu
 65 70 75 80
 Val Asp Asp Ser Leu Glu Gln Pro Cys Gly Leu Gly Cys Leu Val Ser
 85 90 95
 Thr Cys Cys Glu Cys Cys Asn Asn Ile Arg Cys Phe Met Ile Phe Tyr
 100 105 110
 Cys Ile Leu Leu Ile Cys Gln Gly Val Val Phe Gly Leu Ile Asp Val
 115 120 125
 Ser Ile Gly Asp Phe Gln Lys Glu Tyr Gln Leu Lys Thr Ile Glu Lys
 130 135 140
 Leu Ala Leu Glu Lys Ser Tyr Asp Ile Ser Ser Gly Leu Val Ala Ile
 145 150 155 160
 Phe Ile Ala Phe Tyr Gly Asp Arg Lys Lys Val Ile Trp Phe Val Ala
 165 170 175
 Ser Ser Phe Leu Ile Gly Leu Gly Ser Leu Leu Cys Ala Phe Pro Ser
 180 185 190
 Ile Asn Glu Glu Asn Lys Gln Ser Lys Val Gly Ile Glu Gly Ile Ala
 195 200 205
 Glu Cys Thr Ser Met Ile Gly Tyr Ala Leu Gly Tyr Val Leu Gly Ala
 210 215 220
 Pro Leu Val Lys Val Pro Glu Asn Thr Thr Ser Ala Thr Lys Thr Gly

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Asp Leu

465

<210> 521

<211> 679

<212> PRT

<213> Homo sapiens

<400> 521

Met Met His Tyr Leu Lys Asn Ile Met Ile Ala Val Val Glu Ser Met

1

5

10

15

Ile Asn Lys Phe Glu Glu Asp Glu Thr Arg Asn Gln Glu Arg Gln Lys

20

25

30

Lys Ile Gln Lys Glu Lys Ser His Ser Tyr Arg Thr Asp Asn Cys Ser

35

40

45

Asp Ser Asp Ser Ser Leu Asn Gln Ser Tyr Lys Phe Cys Gln Gly Lys

50

55

60

Leu Gln Leu Ile Leu Asp Gln Leu Asp Pro Gly Gln Pro Lys Glu Val

65

70

75

80

Arg Tyr Glu Ala Leu Gln Thr Leu Cys Ser Ala Pro Pro Ser Asp Val

85

90

95

Leu Asn Cys Glu Asn Trp Thr Thr Leu Cys Glu Lys Leu Thr Val Ser

100

105

110

Leu Ser Asp Pro Asp Pro Val Phe Ser Asp Arg Ile Leu Lys Phe Cys

115

120

125

Ala Gln Thr Phe Leu Leu Ser Pro Leu His Met Thr Lys Glu Ile Tyr

130

135

140

Thr Ser Leu Ala Lys Tyr Leu Glu Ser Tyr Phe Leu Ser Arg Glu Asn

145 150 155 160
His Ile Pro Thr Leu Ser Ala Gly Val Asp Ile Thr Asn Pro Asn Met
 165 170 175
Thr Arg Leu Leu Lys Lys Val Arg Leu Leu Asn Glu Tyr Gln Lys Glu
 180 185 190
Ala Pro Ser Phe Trp Ile Arg His Pro Glu Lys Tyr Met Glu Glu Ile
 195 200 205
Val Glu Ser Thr Leu Ser Leu Leu Thr Val Lys His Asn Gln Ser His
 210 215 220
Val Val Ser Gln Lys Ile Leu Asp Pro Ile Tyr Phe Phe Ala Leu Val
225 230 235 240
Asp Thr Lys Ala Val Trp Phe Lys Lys Trp Met His Ala His Tyr Ser
 245 250 255
Arg Thr Thr Val Leu Arg Leu Leu Glu Lys Lys Tyr Lys Ser Leu Val
 260 265 270
Thr Thr Ala Ile Gln Gln Cys Val Gln Tyr Phe Glu Met Cys Lys Thr
 275 280 285
Arg Lys Ala Asp Glu Thr Leu Gly His Ser Lys His Cys Arg Asn Lys
 290 295 300
Gln Lys Thr Phe Tyr Tyr Leu Gly Gln Glu Leu Gln Tyr Ile Tyr Phe
305 310 315 320
Ile His Ser Leu Cys Leu Leu Gly Arg Leu Leu Ile Tyr Lys Gln Gly
 325 330 335
Arg Lys Leu Phe Pro Ile Lys Leu Lys Asn Lys Lys Gly Leu Val Ser
 340 345 350
Leu Ile Asp Leu Leu Val Leu Phe Thr Gln Leu Ile Tyr Tyr Ser Pro
 355 360 365
Ser Cys Pro Lys Met Thr Ser Ala Ala His Ser Glu Asn Tyr Ser Pro
 370 375 380

Ala Ser Met Val Thr Glu Val Leu Trp Ile Leu Ser Asp Gln Lys Glu
 385 390 395 400
 Cys Ala Val Glu Cys Leu Tyr Asn Asn Ile Val Ile Glu Thr Leu Leu
 405 410 415
 Gln Pro Ile His Asn Leu Met Lys Gly Asn Glu Ala Ser Pro Asn Cys
 420 425 430
 Ser Glu Thr Ala Leu Ile His Ile Ala Gly Ile Leu Ala Arg Ile Ala
 435 440 445
 Ser Val Glu Glu Gly Leu Ile Leu Leu Leu Tyr Gly Ala Asn Met Asn
 450 455 460
 Ser Ser Glu Glu Ser Pro Thr Gly Ala His Ile Ile Ala Gln Phe Ser
 465 470 475 480
 Lys Lys Leu Leu Asp Glu Asp Ile Ser Ile Phe Ser Gly Ser Glu Met
 485 490 495
 Leu Pro Val Val Lys Gly Ala Phe Ile Ser Val Cys Arg His Ile Tyr
 500 505 510
 Ser Thr Cys Glu Gly Leu Gln Val Leu Ile Thr Tyr Asn Leu His Glu
 515 520 525
 Ser Ile Ala Lys Ala Trp Lys Lys Thr Ser Leu Leu Ser Glu Arg Ile
 530 535 540
 Pro Thr Pro Val Glu Gly Ser Asp Ser Val Ser Ser Val Ser Gln Glu
 545 550 555 560
 Ser Gln Asn Ile Met Ala Trp Glu Asp Asn Leu Leu Asp Asp Leu Leu
 565 570 575
 His Phe Ala Ala Thr Pro Lys Gly Leu Leu Leu Leu Gln Arg Thr Gly
 580 585 590
 Ala Ile Asn Glu Cys Val Thr Phe Ile Phe Asn Arg Tyr Ala Lys Lys
 595 600 605
 Leu Gln Val Ser Arg His Lys Lys Phe Gly Tyr Gly Val Leu Val Thr

610 615 620
 Arg Val Ala Ser Thr Ala Ala Gly Gly Ile Ala Leu Lys Lys Ser Gly
 625 630 635 640
 Phe Ile Asn Glu Leu Ile Thr Glu Leu Trp Ser Asn Leu Glu Tyr Gly
 645 650 655
 Arg Asp Asp Val Arg Val Thr His Pro Arg Thr Thr Pro Val Asp Pro
 660 665 670
 Ile Asp Arg Ser Cys Gln Lys
 675

<210> 522

<211> 1148

<212> PRT

<213> Homo sapiens

<400> 522

Met Val Leu Asn Leu Tyr Gln Leu Asn Gln Leu Asp Cys Pro Gly Gly
 1 5 10 15
 Arg Leu Ile Gly Gly Trp Glu Asp Asn Pro Phe Lys Gly Asp Leu Lys
 20 25 30
 Ile Val Leu Arg Gly Asn His Thr Thr Gln Asp Trp Ala Leu Pro Glu
 35 40 45
 Gly Pro Asn Gln Gly Ala Lys Val Leu Gly Val Phe Gly Glu Leu Asp
 50 55 60
 Leu His Gly Ile Pro His Ser Ile Tyr Lys Thr Lys Leu Ser Glu Thr
 65 70 75 80
 Ala Phe Ala Gly Ser Lys Val Leu Ser Leu Met Asp Ala Val Asp Trp
 85 90 95

Gln Glu Gly Glu Glu Ile Val Ile Thr Thr Thr Ser Tyr Asp Phe His
100 105 110
Gln Thr Glu Thr Arg Ser Ile Val Lys Ile Leu His Asp His Lys Ile
115 120 125
Leu Ile Leu Asn Asp Ser Leu Ser Tyr Thr His Phe Ala Glu Lys Tyr
130 135 140
His Val Pro Gly Thr Gly Glu Ser Tyr Thr Leu Ala Ala Asp Val Gly
145 150 155 160
Ile Leu Ser Arg Asn Ile Lys Ile Val Gly Glu Asp Tyr Pro Gly Trp
165 170 175
Ser Glu Asp Ser Phe Gly Ala Arg Val Leu Val Gly Ser Phe Thr Glu
180 185 190
Asn Met Met Thr Phe Lys Gly Asn Ala Arg Ile Ser Asn Val Glu Phe
195 200 205
Tyr His Ser Gly Gln Glu Gly Phe Arg Asp Ser Thr Asp Pro Arg Tyr
210 215 220
Ala Val Thr Phe Leu Asn Leu Gly Gln Ile Gln Glu His Gly Ser Ser
225 230 235 240
Tyr Ile Arg Gly Cys Ala Phe His His Gly Phe Ser Pro Ala Ile Gly
245 250 255
Val Phe Gly Thr Asp Gly Leu Asp Ile Asp Asp Asn Ile Ile His Phe
260 265 270
Thr Val Gly Glu Gly Ile Arg Ile Trp Gly Asn Ala Asn Arg Val Arg
275 280 285
Gly Asn Leu Ile Ala Leu Ser Val Trp Pro Gly Thr Tyr Gln Asn Arg
290 295 300
Lys Asp Leu Ser Ser Thr Leu Trp His Ala Ala Ile Glu Ile Asn Arg
305 310 315 320
Gly Thr Asn Thr Val Leu Gln Asn Asn Val Val Ala Gly Phe Gly Arg

| | | |
|---|-----|-----|
| 325 | 330 | 335 |
| Ala Gly Tyr Arg Ile Asp Gly Glu Pro Cys Pro Gly Gln Phe Asn Pro | | |
| 340 | 345 | 350 |
| Val Glu Lys Trp Phe Asp Asn Glu Ala His Gly Gly Leu Tyr Gly Ile | | |
| 355 | 360 | 365 |
| Tyr Met Asn Gln Asp Gly Leu Pro Gly Cys Ser Leu Ile Gln Gly Phe | | |
| 370 | 375 | 380 |
| Thr Ile Trp Thr Cys Trp Asp Tyr Gly Ile Tyr Phe Gln Thr Thr Glu | | |
| 385 | 390 | 395 |
| Ser Val His Ile Tyr Asn Val Thr Leu Val Asp Asn Gly Met Ala Ile | | |
| 405 | 410 | 415 |
| Phe Pro Met Ile Tyr Met Pro Ala Ala Ile Ser His Lys Ile Ser Ser | | |
| 420 | 425 | 430 |
| Lys Asn Val Gln Ile Lys Ser Ser Leu Ile Val Gly Ser Ser Pro Gly | | |
| 435 | 440 | 445 |
| Phe Asn Cys Ser Asp Val Leu Thr Asn Asp Asp Pro Asn Ile Glu Leu | | |
| 450 | 455 | 460 |
| Thr Ala Ala His Arg Ser Pro Arg Ser Pro Ser Gly Gly Arg Ser Gly | | |
| 465 | 470 | 475 |
| Ile Arg Trp Pro Thr Phe Ala Ser Ala His Asn Met Ala Pro Arg Lys | | |
| 485 | 490 | 495 |
| Pro His Ala Gly Ile Met Ser Tyr Asn Ala Ile Ser Gly Leu Leu Asp | | |
| 500 | 505 | 510 |
| Ile Ser Gly Ser Thr Phe Val Gly Phe Lys Asn Val Cys Ser Gly Glu | | |
| 515 | 520 | 525 |
| Thr Asn Val Ile Phe Ile Thr Asn Pro Leu Asn Glu Asp Leu Gln His | | |
| 530 | 535 | 540 |
| Pro Ile His Val Lys Asn Ile Lys Leu Val Asp Thr Thr Glu Gln Ser | | |
| 545 | 550 | 555 |
| | | 560 |

出証特 2 0 0 4 - 3 0 5 9 6 6 2

785 790 795 800
Lys Asp Gln Phe Leu Pro Asn Leu Asp Ser Thr Val Leu Gly Glu Asn
 805 810 815
Tyr Phe Asp Gly Thr Tyr Gln Met Leu Tyr Leu Leu Val Lys Gly Thr
 820 825 830
Ile Pro Val Glu Ile His Thr Ala Thr Val Ile Phe Val Ser Phe Gln
 835 840 845
Leu Ser Val Ala Thr Glu Asp Asp Phe Tyr Thr Ser His Asn Leu Val
 850 855 860
Lys Asn Leu Ala Leu Phe Leu Lys Ile Pro Ser Asp Lys Ile Arg Ile
865 870 875 880
Ser Lys Ile Arg Gly Lys Ser Leu Arg Arg Lys Arg Ser Met Gly Phe
 885 890 895
Ile Ile Glu Ile Glu Ile Gly Asp Pro Pro Ile Gln Phe Ile Ser Asn
 900 905 910
Gly Thr Thr Gly Gln Met Gln Leu Ser Glu Leu Gln Glu Ile Ala Gly
 915 920 925
Ser Leu Gly Gln Ala Val Ile Leu Gly Asn Ile Ser Ser Ile Leu Gly
 930 935 940
Phe Asn Ile Ser Ser Met Ser Ile Thr Asn Pro Leu Pro Ser Pro Ser
945 950 955 960
Asp Ser Gly Trp Ile Lys Val Thr Ala Gln Pro Val Glu Arg Ser Ala
 965 970 975
Phe Pro Val His His Val Ala Phe Val Ser Ser Leu Leu Val Ile Thr
 980 985 990
Gln Pro Val Ala Ala Gln Pro Gly Gln Pro Phe Pro Gln Gln Pro Ser
 995 1000 1005
Val Lys Ala Thr Asp Ser Asp Gly Asn Cys Val Ser Val Gly Ile Thr
1010 1015 1020

Ala Leu Thr Leu Arg Ala Ile Leu Lys Asp Ser Asn Asn Asn Gln Val
 1025 1030 1035 1040
 Asn Gly Leu Ser Gly Asn Thr Thr Ile Pro Phe Ser Ser Cys Trp Ala
 1045 1050 1055
 Asn Tyr Thr Asp Leu Thr Pro Leu Arg Thr Gly Lys Asn Tyr Lys Ile
 1060 1065 1070
 Glu Phe Ile Leu Asp Asn Val Val Gly Val Glu Ser Arg Thr Phe Ser
 1075 1080 1085
 Leu Leu Ala Glu Ser Val Ser Ser Ser Gly Ser Ser Ser Ser Ser Asn
 1090 1095 1100
 Ser Lys Ala Ser Thr Val Gly Thr Tyr Ala Gln Ile Met Thr Val Val
 1105 1110 1115 1120
 Ile Ser Cys Leu Val Gly Arg Met Trp Leu Leu Glu Ile Phe Met Ala
 1125 1130 1135
 Ala Val Ser Thr Leu Asn Ile Thr Leu Arg Ser Tyr
 1140 1145

<210> 523

<211> 300

<212> PRT

<213> Homo sapiens

<400> 523

Met His Ser Leu Lys Lys Val Thr Phe Glu Asp Val Ala Ile Asp Phe
 1 5 10 15
 Thr Gln Glu Glu Trp Ala Met Met Asp Thr Ser Lys Arg Lys Leu Tyr
 20 25 30
 Arg Asp Val Met Leu Glu Asn Ile Ser His Leu Val Ser Leu Gly Tyr

| | | |
|---|-----|-----|
| 35 | 40 | 45 |
| Gln Ile Ser Lys Ser Tyr Ile Ile Leu Gln Leu Glu Gln Gly Lys Glu | | |
| 50 | 55 | 60 |
| Leu Trp Arg Glu Gly Arg Glu Phe Leu Gln Asp Gln Asn Pro Asp Arg | | |
| 65 | 70 | 75 |
| Glu Ser Ala Leu Lys Lys Lys His Met Ile Ser Met His Pro Ile Thr | | |
| 85 | 90 | 95 |
| Arg Lys Asp Ala Ser Thr Ser Met Thr Met Glu Asn Ser Leu Ile Leu | | |
| 100 | 105 | 110 |
| Glu Asp Pro Phe Glu Cys Asn Asp Ser Gly Glu Asp Cys Thr His Ser | | |
| 115 | 120 | 125 |
| Ser Thr Ile Thr Gln Arg Leu Leu Thr His Ser Gly Lys Lys Pro Tyr | | |
| 130 | 135 | 140 |
| Val Ser Lys Gln Cys Gly Lys Ser Leu Arg Asn Leu Phe Ser Pro Lys | | |
| 145 | 150 | 155 |
| Pro His Lys Gln Ile His Thr Lys Gly Lys Ser Tyr Gln Cys Asn Leu | | |
| 165 | 170 | 175 |
| Cys Glu Lys Ala Tyr Thr Asn Cys Phe Arg Leu Arg Arg His Lys Met | | |
| 180 | 185 | 190 |
| Thr His Thr Gly Glu Arg Pro Tyr Ala Cys His Leu Cys Gly Lys Ala | | |
| 195 | 200 | 205 |
| Phe Thr Gln Cys Ser His Leu Arg Arg His Glu Lys Thr His Thr Gly | | |
| 210 | 215 | 220 |
| Glu Arg Pro Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser | | |
| 225 | 230 | 235 |
| Phe Asn Leu Arg Arg His Glu Arg Thr His Leu Gly Lys Lys Cys Tyr | | |
| 245 | 250 | 255 |
| Glu Cys Asp Lys Ser Gly Lys Ala Phe Ser Gln Ser Ser Gly Phe Arg | | |
| 260 | 265 | 270 |

Gly Asn Lys Ile Ile His Thr Gly Glu Lys Pro His Ala Cys Leu Leu

275

280

285

Cys Gly Lys Ala Phe Ser Leu Ser Ser Asp Leu Arg

290

295

300

<210> 524

<211> 1216

<212> PRT

<213> Homo sapiens

<400> 524

Met Ser Gln Ala Gly Asp Val Glu Gly Pro Ser Thr Gly Asp Pro Val

1

5

10

15

Leu Ser Pro Gln His Asn Cys Glu Leu Leu Gln Asn Met Glu Gly Ala

20

25

30

Ser Ser Met Pro Gly Leu Ser Pro Asp Gly Pro Gly Ala Ser Ser Gly

35

40

45

Pro Gly Val Arg Ala Gly Ser Arg Arg Lys Ile Pro Arg Lys Glu Ala

50

55

60

Leu Arg Gly Gly Ser Ser Arg Ala Ala Gly Ala Ala Glu Val Arg Pro

65

70

75

80

Gly Val Leu Glu Leu Leu Ala Val Val Gln Ser Arg Gly Ser Met Leu

85

90

95

Ala Pro Gly Leu His Met Gln Leu Pro Ser Val Pro Thr Gln Gly Arg

100

105

110

Ala Leu Thr Ser Lys Arg Leu Gln Val Ser Leu Cys Asp Ile Leu Asp

115

120

125

Asp Ser Cys Pro Arg Lys Leu Cys Ser Arg Ser Ala Gly Leu Pro Glu

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Arg Ala Leu Ala Cys Arg Glu Arg Leu Ala Gly Val Glu Glu Val Ser | | |
| 145 | 150 | 155 |
| Cys Leu Arg Pro Arg Glu Ala Arg Asp Gly Gly Met Ser Ser Pro Gly | | |
| 165 | 170 | 175 |
| Cys Asp Arg Arg Ser Pro Thr Leu Ser Lys Glu Glu Pro Pro Gly Arg | | |
| 180 | 185 | 190 |
| Pro Leu Thr Ser Ser Pro Asp Pro Val Pro Val Arg Val Arg Lys Lys | | |
| 195 | 200 | 205 |
| Trp Arg Arg Gln Gly Ala His Ser Glu Cys Glu Glu Gly Ala Gly Asp | | |
| 210 | 215 | 220 |
| Phe Leu Trp Leu Asp Gln Ser Pro Arg Gly Asp Asn Leu Leu Ser Val | | |
| 225 | 230 | 235 |
| Gly Asp Pro Pro Gln Val Ala Asp Leu Glu Ser Leu Gly Gly Pro Cys | | |
| 245 | 250 | 255 |
| Arg Pro Pro Ser Pro Lys Asp Thr Gly Ser Gly Pro Gly Glu Pro Gly | | |
| 260 | 265 | 270 |
| Gly Ser Gly Ala Gly Cys Ala Ser Gly Thr Glu Lys Phe Gly Tyr Leu | | |
| 275 | 280 | 285 |
| Pro Ala Thr Gly Asp Gly Pro Gln Pro Gly Ser Pro Cys Gly Pro Val | | |
| 290 | 295 | 300 |
| Gly Phe Pro Val Pro Ser Gly Gly Glu Ser Leu Ser Ser Ala Ala Gln | | |
| 305 | 310 | 315 |
| Ala Pro Pro Gln Ser Ala Ala Leu Cys Leu Gly Ala Ser Ala Gln Ala | | |
| 325 | 330 | 335 |
| Ser Ala Glu Gln Gln Glu Ala Val Cys Val Val Arg Thr Gly Ser Asp | | |
| 340 | 345 | 350 |
| Glu Gly Gln Ala Pro Ala Gln Asp Gln Glu Glu Leu Glu Ala Lys Ala | | |
| 355 | 360 | 365 |

Gln Pro Ala Ser Arg Gly Arg Leu Glu Gln Gly Leu Ala Ala Pro Ala
370 375 380

Asp Thr Cys Ala Ser Ser Arg Glu Pro Leu Gly Gly Leu Ser Ser Ser
385 390 395 400

Leu Asp Thr Glu Ala Ser Arg Ala Cys Ser Gly Pro Phe Met Glu Gln
405 410 415

Arg Arg Ser Lys Gly Thr Lys Asn Leu Lys Lys Gly Pro Val Pro Cys
420 425 430

Ala Gln Asp Arg Gly Thr Asp Arg Ser Ser Asp Asn Ser His Gln Asp
435 440 445

Arg Pro Glu Glu Pro Ser Pro Gly Gly Cys Pro Arg Leu Glu Glu Val
450 455 460

Lys Ile Pro His Gly Val Lys Leu Val Cys Tyr Leu Gly Ser Gly Pro
465 470 475 480

Val Ile Gln Leu Leu Gly Ala Ile Ser His Gly Gln Ala Gly Gly Gln
485 490 495

Leu Pro Pro Lys Leu Glu Val Leu Glu Asp Leu Met Glu Val Ser Ser
500 505 510

Pro Ser Pro Ala Gln Arg Leu Arg Arg Lys Lys Arg Pro Met Val Gln
515 520 525

Gly Pro Ala Gly Cys Gln Val Phe Gln Pro Ser Pro Ser Gly Gly Thr
530 535 540

Ala Gly Asp Pro Gly Gly Leu Ser Asp Pro Phe Tyr Pro Pro Arg Ser
545 550 555 560

Gly Ser Leu Ala Leu Gly Asp Pro Ser Ser Asp Pro Ala Cys Ser Gln
565 570 575

Ser Gly Pro Met Glu Ala Glu Glu Asp Ser Leu Pro Glu Gln Pro Glu
580 585 590

Asp Ser Ala Gln Leu Gln Gln Glu Lys Pro Ser Leu Tyr Ile Gly Val

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Lys Thr Arg Glu Leu Ser Pro Thr Glu Pro Gln Asp Arg Val Pro Pro
835 840 845

Ser Gly Leu His Val Pro Ala Ala Pro Thr Lys Ala Leu Pro Cys Leu
850 855 860

Pro Pro Trp Glu Gly Val Leu Asp Met Phe Ser Ile Lys Arg Phe Arg
865 870 875 880

Ala Arg Ala Gln Leu Val Ser Gly His Ser Cys Arg Leu Val Gln Ala
885 890 895

Leu Pro Thr Val Ile Arg Ser Ala Gly Cys Ile Pro Ser Asn Ile Val
900 905 910

Trp Asp Leu Leu Ala Ser Ile Cys Pro Ala Lys Ala Lys Asp Val Cys
915 920 925

Val Val Arg Leu Cys Pro His Gly Ala Arg Asp Thr Gln Asn Cys Arg
930 935 940

Leu Leu Tyr Ser Tyr Leu Asn Asp Arg Gln Arg His Gly Leu Ala Ser
945 950 955 960

Val Glu His Met Gly Met Val Leu Leu Pro Leu Pro Ala Phe Gln Pro
965 970 975

Leu Pro Thr Arg Leu Arg Pro Leu Gly Gly Pro Gly Leu Trp Ala Leu
980 985 990

Pro Val Ser Pro Leu Leu Ser Pro Gly Leu Glu Val Thr His Ser Ser
995 1000 1005

Leu Leu Leu Ala Val Leu Leu Pro Lys Glu Gly Leu Pro Asp Thr Ala
1010 1015 1020

Gly Ser Ser Pro Trp Leu Gly Lys Val Gln Lys Met Val Ser Phe Asn
1025 1030 1035 1040

Ser Lys Val Glu Lys Arg Tyr Tyr Gln Pro Asp Asp Arg Arg Pro Asn
1045 1050 1055

Val Pro Leu Lys Gly Thr Pro Pro Pro Gly Gly Ala Trp Gln Gln Ser

| | | | |
|---|------|------|------|
| 1060 | 1065 | 1070 | |
| Gln Gly Arg Gly Ser Ile Ala Pro Arg Gly Ile Ser Ala Trp Gln Arg | | | |
| 1075 | 1080 | 1085 | |
| Pro Pro Arg Gly Arg Gly Arg Leu Trp Pro Glu Pro Glu Asn Trp Gln | | | |
| 1090 | 1095 | 1100 | |
| His Pro Gly Arg Gly Gln Trp Pro Pro Glu Pro Gly Leu Arg Gln Ser | | | |
| 1105 | 1110 | 1115 | 1120 |
| Gln His Pro Tyr Ser Val Ala Pro Ala Gly His Gly Phe Gly Arg Gly | | | |
| 1125 | 1130 | 1135 | |
| Gln His Phe His Arg Asp Ser Cys Pro His Gln Ala Leu Leu Arg His | | | |
| 1140 | 1145 | 1150 | |
| Leu Glu Ser Leu Ala Thr Met Ser His Gln Leu Gln Ala Leu Leu Cys | | | |
| 1155 | 1160 | 1165 | |
| Pro Gln Thr Lys Ser Ser Ile Pro Arg Pro Leu Gln Arg Leu Ser Ser | | | |
| 1170 | 1175 | 1180 | |
| Ala Leu Ala Ala Pro Glu Pro Pro Gly Pro Ala Arg Asp Ser Ser Leu | | | |
| 1185 | 1190 | 1195 | 1200 |
| Gly Pro Thr Asp Glu Ala Gly Ser Glu Cys Pro Phe Pro Arg Lys Ala | | | |
| 1205 | 1210 | 1215 | |

<210> 525

<211> 435

<212> PRT

<213> Homo sapiens

<400> 525

Met Arg Lys Leu Leu Thr Asn Leu Pro Ala Ala Ala Val Leu Ser Ala

1

5

10

15

Gln Val Tyr Ser Ala Val Leu Arg Gly Leu Trp Glu Glu Asn Val Cys
 20 25 30
 Gly Thr Pro Gly Arg Thr Arg Val Cys Thr Ala Leu Leu Tyr Gly Gln
 35 40 45
 Val Cys Pro Phe Gln Asp Ser Thr Asp Gly Leu Arg Thr Ile Thr Ser
 50 55 60
 Ile Leu Phe Asn Trp Pro Pro Glu Asn Thr Ser Val Tyr Tyr Gln Pro
 65 70 75 80
 Pro Gln Arg Ser Ser Phe Arg Ile Lys Leu Ala Phe Arg Asn Leu Ser
 85 90 95
 Trp Pro Gly Leu Gly Leu Glu Asp His Gln Glu Ile Val Leu Gly Gln
 100 105 110
 Leu Val Leu Pro Glu Pro Asn Glu Ala Lys Pro Asp Asp Pro Ala Pro
 115 120 125
 Arg Pro Gly Gln His Ala Leu Thr Met Pro Ala Leu Glu Pro Ala Pro
 130 135 140
 Pro Leu Leu Ala Asp Leu Gly Pro Ala Leu Glu Pro Glu Ser Pro Ala
 145 150 155 160
 Ala Leu Gly Pro Pro Gly Tyr Leu His Ser Ala Pro Gly Pro Ala Pro
 165 170 175
 Ala Pro Gly Glu Glu Pro Pro Pro Gly Thr Val Leu Glu Pro Gln Ser
 180 185 190
 Ala Pro Glu Ser Ser Cys Pro Cys Arg Gly Ser Val Lys Asn Gln Pro
 195 200 205
 Ser Glu Glu Leu Pro Asp Met Thr Thr Phe Pro Pro Arg Leu Leu Ala
 210 215 220
 Glu Gln Leu Thr Leu Met Asp Ala Glu Leu Phe Lys Lys Val Val Leu
 225 230 235 240
 Tyr Glu Cys Leu Gly Cys Ile Trp Gly Gln Gly His Leu Lys Gly Asn

| | | |
|---|-----|-----|
| 245 | 250 | 255 |
| Glu His Met Ala Pro Thr Val Arg Ala Thr Ile Ala His Phe Asn Arg | | |
| 260 | 265 | 270 |
| Leu Thr Asn Cys Ile Thr Thr Ser Cys Leu Gly Asp His Ser Met Arg | | |
| 275 | 280 | 285 |
| Ala Arg Asp Arg Ala Arg Val Val Glu His Trp Ile Lys Val Ala Arg | | |
| 290 | 295 | 300 |
| Glu Cys Leu Ser Leu Asn Asn Phe Ser Ser Val His Val Ile Val Ser | | |
| 305 | 310 | 315 |
| Ala Leu Cys Ser Asn Pro Ile Gly Gln Leu His Lys Thr Trp Ala Gly | | |
| 325 | 330 | 335 |
| Val Ser Ser Lys Ser Met Lys Glu Leu Lys Glu Leu Cys Lys Lys Asp | | |
| 340 | 345 | 350 |
| Thr Ala Val Lys Arg Asp Leu Leu Ile Lys Arg Asp Asp Gly Glu Asn | | |
| 355 | 360 | 365 |
| Asn Gly Asn Ser Tyr Arg Lys Leu Ser Pro Gln Arg Pro Cys Glu Val | | |
| 370 | 375 | 380 |
| Ala Val Val Cys Ile Thr Leu Tyr Arg Arg Gly Asn Ser Leu Arg Glu | | |
| 385 | 390 | 395 |
| Ala Arg Leu Gln Asp Trp Val Thr His Thr Gly Ser Val Asp Leu Gly | | |
| 405 | 410 | 415 |
| Gln Trp Arg Gly Ala Leu Arg Trp Pro Pro Arg Arg Gly Thr Pro Arg | | |
| 420 | 425 | 430 |
| Glu Pro Arg | | |
| 435 | | |

<210> 526

<211> 171

<212> PRT

<213> Homo sapiens

<400> 526

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Lys | Ser | Glu | Ile | Lys | Arg | Thr | Gly | Gly | Phe | Gly | Ser | Thr | Asn |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Gln | Gly | Lys | Ala | Ala | Tyr | Trp | Val | Asn | Gln | Ile | Thr | Asp | Lys | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Thr | Cys | Glu | Ile | Thr | Ile | Gln | Gly | Lys | Lys | Phe | Lys | Gly | Leu | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Thr | Arg | Ala | Asp | Ile | Ser | Ile | Ile | Ser | Leu | Gln | His | Trp | Pro | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Trp | Pro | Ile | Gln | Pro | Thr | Gln | Phe | Asn | Ile | Val | Gly | Val | Gly | Glu |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Ala | Pro | Glu | Val | Tyr | Gln | Ser | Ser | Ser | Val | Leu | Pro | Cys | Glu | Gly | Pro |
| | | | | 85 | | | | | 90 | | | | 95 | | |
| Asp | Gly | Gln | Pro | Glu | Thr | Ile | Gln | Pro | Ile | Ile | Thr | Ser | Val | Ser | Ile |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Asn | Leu | Trp | Gly | Arg | Asp | Leu | Leu | Gln | Gln | Cys | Arg | Ala | Gln | Val | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Pro | Glu | Gln | Leu | Tyr | Ser | Pro | Gln | Ser | Gln | His | Met | Met | His | Glu |
| | 130 | | | | | 135 | | | | 140 | | | | | |
| Met | Gly | Tyr | Val | Pro | Gly | Met | Gly | Leu | Gln | Lys | Asn | Leu | Gln | Gly | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Lys | Ser | Ser | Arg | Gln | Arg | Leu | Gly | Asn | Asn | Phe | | | | | |
| | | | | 165 | | | | | 170 | | | | | | |

<210> 527

<211> 599

<212> PRT

<213> Homo sapiens

<400> 527

Met Asp Pro Pro Met Asp Asp Gln Pro Gly Glu Lys Glu Leu Val Lys

1 5 10 15

Arg Ser Gln Leu Asp Gly Glu Gly Asp Gly Pro Leu Ser Asn Gln Leu

20 25 30

Ser Ala Ser Ser Thr Ile Asn Pro Val Pro Leu Val Gly Leu Gln Lys

35 40 45

Pro Glu Met Ser Leu Pro Val Lys Pro Gly Gln Gly Asp Ser Glu Ala

50 55 60

Ser Ser Pro Phe Thr Pro Val Ala Asp Glu Asp Ser Val Val Phe Ser

65 70 75 80

Lys Leu Thr Tyr Leu Gly Cys Ala Ser Val Asn Ala Pro Arg Ser Glu

85 90 95

Val Glu Ala Leu Arg Met Met Ser Ile Leu Arg Ser Gln Cys Gln Ile

100 105 110

Ser Leu Asp Val Thr Leu Ser Val Pro Asn Val Ser Glu Gly Ile Val

115 120 125

Arg Leu Leu Asp Pro Gln Thr Asn Thr Glu Ile Ala Asn Tyr Pro Ile

130 135 140

Tyr Lys Ile Leu Phe Cys Val Arg Gly His Asp Gly Thr Pro Glu Ser

145 150 155 160

Asp Cys Phe Ala Phe Thr Glu Ser His Tyr Asn Ala Glu Leu Phe Arg

165 170 175

Ile His Val Phe Arg Cys Glu Ile Gln Glu Ala Val Ser Arg Ile Leu

180 185 190

Tyr Ser Phe Ala Thr Ala Phe Arg Arg Ser Ala Lys Gln Thr Pro Leu
195 200 205
Ser Ala Thr Ala Ala Pro Gln Thr Pro Asp Ser Asp Ile Phe Thr Phe
210 215 220
Ser Val Ser Leu Glu Ile Lys Glu Asp Asp Gly Lys Gly Tyr Phe Ser
225 230 235 240
Ala Val Pro Lys Asp Lys Asp Arg Gln Cys Phe Lys Leu Arg Gln Gly
245 250 255
Ile Asp Lys Lys Ile Val Ile Tyr Val Gln Gln Thr Thr Asn Lys Glu
260 265 270
Leu Ala Ile Glu Arg Cys Phe Gly Leu Leu Leu Ser Pro Gly Lys Asp
275 280 285
Val Arg Asn Ser Asp Met His Leu Leu Asp Leu Glu Ser Met Gly Lys
290 295 300
Ser Ser Asp Gly Lys Ser Tyr Val Ile Thr Gly Ser Trp Asn Pro Lys
305 310 315 320
Ser Pro His Phe Gln Val Val Asn Glu Glu Thr Pro Lys Asp Lys Val
325 330 335
Leu Phe Met Thr Thr Ala Val Asp Leu Val Ile Thr Glu Val Gln Glu
340 345 350
Pro Val Arg Phe Leu Leu Glu Thr Lys Val Arg Val Cys Ser Pro Asn
355 360 365
Glu Arg Leu Phe Trp Pro Phe Ser Lys Arg Ser Thr Thr Glu Asn Phe
370 375 380
Phe Leu Lys Leu Lys Gln Ile Lys Gln Arg Glu Arg Lys Asn Asn Thr
385 390 395 400
Asp Thr Leu Tyr Glu Val Val Cys Leu Glu Ser Glu Ser Glu Arg Glu
405 410 415
Arg Arg Lys Thr Thr Ala Ser Pro Ser Val Arg Leu Pro Gln Ser Gly

420 425 430
Ser Gln Ser Ser Val Ile Pro Ser Pro Pro Glu Asp Asp Glu Glu Glu
435 440 445
Asp Asn Asp Glu Pro Leu Leu Ser Gly Ser Gly Asp Val Ser Lys Glu
450 455 460
Cys Ala Glu Lys Ile Leu Glu Thr Trp Gly Glu Leu Leu Ser Lys Trp
465 470 475 480
His Leu Asn Leu Asn Val Arg Pro Lys Gln Leu Ser Ser Leu Val Arg
485 490 495
Asn Gly Val Pro Glu Ala Leu Arg Gly Glu Val Trp Gln Leu Leu Ala
500 505 510
Gly Cys His Asn Asn Asp His Leu Val Glu Lys Tyr Arg Ile Leu Ile
515 520 525
Thr Lys Glu Ser Pro Gln Asp Ser Ala Ile Thr Arg Asp Ile Asn Arg
530 535 540
Thr Phe Pro Ala His Asp Tyr Phe Lys Asp Thr Gly Gly Asp Gly Gln
545 550 555 560
Asp Ser Leu Tyr Lys Ile Cys Lys Val Phe His Val Lys Lys Lys Lys
565 570 575
Asp Ser Ile Leu Ser Gly Gly Ser Thr Leu Lys Leu His Lys Lys Gln
580 585 590
Leu Gln Ser Val Ile Cys Ile
595

<210> 528

<211> 1340

<212> PRT

<213> Homo sapiens

<400> 528

Met Leu Arg Lys Gly Ala Asn Arg Tyr Leu Thr Val Lys Lys Lys Asp
 1 5 10 15
 Gly Ser Glu Thr Ala His Ala Met Met Thr Cys Asn Leu Thr His Asn
 20 25 30
 Thr Lys His Ala Val Arg Ser Leu Ile Gln Arg Phe Pro Val Thr Asn
 35 40 45
 Lys Glu Arg Thr Glu Leu Leu Pro Lys Thr Glu Arg Gly Asn Val Phe
 50 55 60
 Ala Val Glu Ala Glu Asn Arg Glu Met Ser Lys Thr Ser Gly Arg Leu
 65 70 75 80
 Asn Asn Gly Ile Pro Gln Ile Pro Val Lys Arg Gly Glu Ser Glu Phe
 85 90 95
 Asp Ser Phe Arg Gln Ser Leu Pro Val Phe Glu Lys Gln Glu Glu Ile
 100 105 110
 Val Lys Ile Ile Lys Glu Asn Lys Val Val Leu Ile Val Gly Glu Thr
 115 120 125
 Gly Ser Gly Lys Thr Thr Gln Ile Pro Gln Phe Leu Leu Asp Asp Cys
 130 135 140
 Phe Lys Asn Gly Ile Pro Cys Arg Ile Phe Cys Thr Gln Pro Arg Arg
 145 150 155 160
 Leu Ala Ala Ile Ala Val Ala Glu Arg Val Ala Ala Glu Arg Arg Glu
 165 170 175
 Arg Ile Gly Gln Thr Ile Gly Tyr Gln Ile Arg Leu Glu Ser Arg Val
 180 185 190
 Ser Pro Lys Thr Leu Leu Thr Phe Cys Thr Asn Gly Val Leu Leu Arg
 195 200 205
 Thr Leu Met Ala Gly Asp Ser Thr Leu Ser Thr Val Thr His Val Ile

210 215 220
Val Asp Glu Val His Glu Arg Asp Arg Phe Ser Asp Phe Leu Leu Thr
225 230 235 240
Lys Leu Arg Asp Leu Leu Gln Lys His Pro Thr Leu Lys Leu Ile Leu
245 250 255
Ser Ser Ala Ala Leu Asp Val Asn Leu Phe Ile Arg Tyr Phe Gly Ser
260 265 270
Cys Pro Val Ile Tyr Ile Gln Gly Arg Pro Phe Glu Val Lys Glu Met
275 280 285
Phe Leu Glu Asp Ile Leu Arg Thr Thr Gly Tyr Thr Asn Lys Glu Met
290 295 300
Leu Lys Tyr Lys Lys Glu Lys Gln Gln Glu Glu Lys Gln Gln Thr Thr
305 310 315 320
Leu Thr Glu Trp Tyr Ser Ala Gln Glu Asn Ser Phe Lys Pro Glu Ser
325 330 335
Gln Arg Gln Arg Thr Val Leu Asn Val Thr Asp Glu Tyr Asp Leu Leu
340 345 350
Asp Asp Gly Gly Asp Ala Val Phe Ser Gln Leu Thr Glu Lys Asp Val
355 360 365
Asn Cys Leu Glu Pro Trp Leu Ile Lys Glu Met Asp Ala Cys Leu Ser
370 375 380
Asp Ile Trp Leu His Lys Asp Ile Asp Ala Phe Ala Gln Val Phe His
385 390 395 400
Leu Ile Leu Thr Glu Asn Val Ser Val Asp Tyr Arg His Ser Glu Thr
405 410 415
Ser Ala Thr Ala Leu Met Val Ala Ala Gly Arg Gly Phe Ala Ser Gln
420 425 430
Val Glu Gln Leu Ile Ser Met Gly Ala Asn Val His Ser Lys Ala Ser
435 440 445

Asn Gly Trp Met Ala Leu Asp Trp Ala Lys His Phe Gly Gln Thr Glu
450 455 460
Ile Val Asp Leu Leu Glu Ser Tyr Ser Ala Ser Leu Glu Phe Gly Asn
465 470 475 480
Leu Asp Glu Ser Ser Leu Val Gln Thr Asn Gly Ser Asp Leu Ser Ala
485 490 495
Glu Asp Arg Glu Leu Leu Lys Ala Tyr His His Ser Phe Asp Asp Glu
500 505 510
Lys Val Asp Leu Asp Leu Ile Met His Leu Leu Tyr Asn Ile Cys His
515 520 525
Ser Cys Asp Ala Gly Ala Val Leu Ile Phe Leu Pro Gly Tyr Asp Glu
530 535 540
Ile Val Gly Leu Arg Asp Arg Ile Leu Phe Asp Asp Lys Arg Phe Ala
545 550 555 560
Asp Asn Thr His Arg Tyr Gln Val Phe Met Leu His Ser Asn Met Gln
565 570 575
Thr Ser Asp Gln Lys Lys Val Leu Lys Asn Pro Pro Ala Gly Val Arg
580 585 590
Lys Ile Ile Leu Ser Thr Asn Ile Ala Glu Thr Ser Ile Thr Val Asn
595 600 605
Asp Val Val Phe Val Ile Asp Ser Gly Lys Val Lys Glu Lys Ser Phe
610 615 620
Asp Ala Leu Asn Phe Val Thr Met Leu Lys Met Val Trp Ile Ser Lys
625 630 635 640
Ala Ser Ala Ile Gln Arg Lys Gly Arg Ala Gly Arg Cys Arg Pro Gly
645 650 655
Ile Cys Phe Arg Leu Phe Ser Arg Leu Arg Phe Gln Asn Met Leu Glu
660 665 670
Phe Gln Thr Pro Glu Leu Leu Arg Met Pro Leu Gln Glu Leu Cys Leu

675 680 685
His Thr Lys Leu Leu Ala Pro Val Asn Cys Pro Ile Ala Asp Phe Leu
690 695 700
Met Lys Ala Pro Glu Pro Pro Pro Ala Leu Ile Val Arg Asn Ala Val
705 710 715 720
Gln Met Leu Lys Thr Ile Asp Ala Met Asp Thr Trp Glu Asp Leu Thr
725 730 735
Glu Leu Gly Tyr His Leu Ala Asp Leu Pro Val Glu Pro His Leu Gly
740 745 750
Lys Met Val Leu Cys Ala Val Val Leu Lys Cys Leu Asp Pro Ile Leu
755 760 765
Thr Ile Ala Cys Thr Leu Ala Tyr Arg Asp Pro Phe Val Leu Pro Thr
770 775 780
Gln Ala Ser Gln Lys Arg Ala Ala Met Leu Cys Arg Lys Arg Phe Thr
785 790 795 800
Ala Gly Ala Phe Ser Asp His Met Ala Leu Leu Arg Ala Phe Gln Ala
805 810 815
Trp Gln Lys Ala Arg Ser Asp Gly Trp Glu Arg Ala Phe Cys Glu Lys
820 825 830
Asn Phe Leu Ser Gln Ala Thr Met Glu Ile Ile Ile Gly Met Arg Thr
835 840 845
Gln Leu Leu Gly Gln Leu Arg Ala Ser Gly Phe Val Arg Ala Arg Gly
850 855 860
Gly Gly Asp Ile Arg Asp Val Asn Thr Asn Ser Glu Asn Trp Ala Val
865 870 875 880
Val Lys Ala Ala Leu Val Ala Gly Met Tyr Pro Asn Leu Val His Val
885 890 895
Asp Arg Glu Asn Leu Val Leu Thr Gly Pro Lys Glu Lys Lys Val Arg
900 905 910

Phe His Pro Ala Ser Val Leu Ser Gln Pro Gln Tyr Lys Lys Ile Pro
915 920 925

Pro Ala Asn Gly Gln Ala Ala Ala Ile Lys Ala Leu Pro Thr Asp Trp
930 935 940

Leu Ile Tyr Asp Glu Met Thr Arg Ala His Arg Ile Ala Asn Ile Arg
945 950 955 960

Cys Cys Ser Ala Val Thr Pro Val Thr Ile Leu Val Phe Cys Gly Pro
965 970 975

Ala Arg Leu Ala Ser Asn Ala Leu Gln Glu Pro Ser Ser Phe Arg Val
980 985 990

Asp Gly Ile Pro Asn Asp Ser Ser Asp Ser Glu Met Glu Asp Lys Thr
995 1000 1005

Thr Ala Asn Leu Ala Ala Leu Lys Leu Asp Glu Trp Leu His Phe Thr
1010 1015 1020

Leu Glu Pro Glu Ala Ala Ser Leu Leu Leu Gln Leu Arg Gln Lys Trp
1025 1030 1035 1040

His Ser Leu Phe Leu Arg Arg Met Arg Ala Pro Ser Lys Pro Trp Ser
1045 1050 1055

Gln Val Asp Glu Ala Thr Ile Arg Ala Ile Ile Ala Val Leu Ser Thr
1060 1065 1070

Glu Glu Gln Ser Ala Gly Leu Gln Gln Pro Ser Gly Ile Gly Gln Arg
1075 1080 1085

Pro Arg Pro Met Ser Ser Glu Glu Leu Pro Leu Ala Ser Ser Trp Arg
1090 1095 1100

Ser Asn Asn Ser Arg Lys Ser Ser Ala Asp Thr Glu Phe Ser Asp Glu
1105 1110 1115 1120

Cys Thr Thr Ala Glu Arg Val Leu Met Lys Ser Pro Ser Pro Ala Leu
1125 1130 1135

His Pro Pro Gln Lys Tyr Lys Asp Arg Gly Ile Leu His Pro Lys Arg

| | | | |
|---|------|------|------|
| 1140 | 1145 | 1150 | |
| Gly Thr Glu Asp Arg Ser Asp Gln Ser Ser Leu Lys Ser Thr Asp Ser | | | |
| 1155 | 1160 | 1165 | |
| Ser Ser Tyr Pro Ser Pro Cys Ala Ser Pro Ser Pro Pro Ser Ser Gly | | | |
| 1170 | 1175 | 1180 | |
| Lys Gly Ser Lys Ser Pro Ser Pro Arg Pro Asn Met Pro Val Arg Tyr | | | |
| 1185 | 1190 | 1195 | 1200 |
| Phe Ile Met Lys Ser Ser Asn Leu Arg Asn Leu Glu Ile Ser Gln Gln | | | |
| 1205 | 1210 | 1215 | |
| Lys Gly Ile Trp Ser Thr Thr Pro Ser Asn Glu Arg Lys Leu Asn Arg | | | |
| 1220 | 1225 | 1230 | |
| Ala Phe Trp Glu Ser Ser Ile Val Tyr Leu Val Phe Ser Val Gln Gly | | | |
| 1235 | 1240 | 1245 | |
| Ser Gly His Phe Gln Gly Phe Ser Arg Met Ser Ser Glu Ile Gly Arg | | | |
| 1250 | 1255 | 1260 | |
| Glu Lys Ser Gln Asp Trp Gly Ser Ala Gly Leu Gly Gly Val Phe Lys | | | |
| 1265 | 1270 | 1275 | 1280 |
| Val Glu Trp Ile Arg Lys Glu Ser Leu Pro Phe Gln Phe Ala His His | | | |
| 1285 | 1290 | 1295 | |
| Leu Leu Asn Pro Trp Asn Asp Asn Lys Lys Val Gln Ile Ser Arg Asp | | | |
| 1300 | 1305 | 1310 | |
| Gly Gln Glu Leu Glu Pro Gln Val Gly Glu Gln Leu Leu Gln Leu Trp | | | |
| 1315 | 1320 | 1325 | |
| Glu Arg Leu Pro Leu Gly Glu Lys Asn Thr Thr Asp | | | |
| 1330 | 1335 | 1340 | |

<210> 529

<211> 574

<212> PRT

<213> Homo sapiens

<400> 529

Met Thr Ala Gly Ser Val Cys Val Pro Gln Ile Ile Pro Leu Arg Val

1 5 10 15

Pro Gln Pro Gly Lys Ala Asn His Glu Ile Asp Asn Asn Thr Leu Leu

20 25 30

Glu Met Lys Ser Asp Thr Pro Asp Val Asn Ile Tyr Tyr Thr Leu Asp

35 40 45

Gly Ser Lys Pro Glu Phe Leu Lys Arg Ile Gly Tyr Gly Glu Asn Asn

50 55 60

Thr Phe Lys Tyr Ile Lys Pro Ile Thr Leu Pro Asp Gly Lys Ile Gln

65 70 75 80

Val Lys Ala Ile Ala Val Ser Lys Asp Cys Arg Gln Ser Gly Ile Val

85 90 95

Thr Lys Val Phe His Val Asp Tyr Glu Pro Pro Asn Ile Val Ser Pro

100 105 110

Glu Asp Asn Val Glu Asn Val Leu Lys Asp Ser Ser Arg Gln Glu Phe

115 120 125

Lys Asn Gly Phe Val Gly Ser Lys Leu Lys Lys Lys Tyr Lys Asn Ser

130 135 140

Glu Asn Gln Arg Ser Trp Asn Val Asn Leu Arg Lys Phe Pro Glu Ser

145 150 155 160

Pro Leu Glu Ile Pro Ala Tyr Gly Gly Gly Ser Gly Ser Arg Pro Pro

165 170 175

Thr Arg Gln Ser Gln Ser Pro Gly Phe Ala His Val Ser Gly Gln Lys

180 185 190

Cys Leu Thr Ser Thr Glu Ile Met Arg Ile Gln Arg Glu Thr Asp Phe

195 200 205
Leu Lys Cys Ala His Cys Leu Ala Pro Arg Pro Ser Asp Pro Phe Ala
210 215 220
Arg Phe Cys Gln Glu Cys Gly Ser Pro Val Pro Pro Ile Phe Gly Cys
225 230 235 240
Arg Leu Pro Pro Pro Glu Gly Ala Gln Met Gly Leu Cys Ala Glu Cys
245 250 255
Arg Ser Leu Val Pro Met Asn Thr Pro Ile Cys Val Val Cys Glu Ala
260 265 270
Pro Leu Ala Leu Gln Leu Gln Pro Gln Ala Ser Leu His Leu Lys Glu
275 280 285
Lys Val Ile Cys Arg Ala Cys Gly Thr Gly Asn Pro Ala His Leu Arg
290 295 300
Tyr Cys Val Thr Cys Glu Gly Ala Leu Pro Ser Ser Gln Glu Ser Met
305 310 315 320
Cys Ser Gly Asp Lys Ala Pro Pro Pro Pro Thr Gln Lys Gly Gly Thr
325 330 335
Ile Ser Cys Tyr Arg Cys Gly Arg Trp Asn Leu Trp Glu Ala Ser Phe
340 345 350
Cys Gly Trp Cys Gly Ala Met Leu Gly Ile Pro Ala Gly Cys Ser Val
355 360 365
Cys Pro Lys Cys Gly Ala Ser Asn His Leu Ser Ala Arg Phe Cys Gly
370 375 380
Ser Cys Gly Ile Cys Val Lys Ser Leu Val Lys Leu Ser Leu Asp Arg
385 390 395 400
Ser Leu Ala Leu Ala Ala Glu Glu Pro Arg Pro Phe Ser Glu Ser Leu
405 410 415
Asn Ile Pro Leu Pro Arg Ser Asp Val Gly Thr Lys Arg Asp Ile Gly
420 425 430

Thr Gln Thr Val Gly Leu Phe Tyr Pro Ser Gly Lys Leu Leu Ala Lys

435

440

445

Lys Glu Gln Glu Leu Ala Ser Gln Lys Gln Arg Gln Glu Lys Met Ser

450

455

460

Asp His Lys Pro Leu Leu Thr Ala Ile Ser Pro Gly Arg Gly Tyr Trp

465

470

475

480

Arg Arg Gln Leu Asp His Ile Ser Ala His Leu Arg Cys Tyr Ala Gln

485

490

495

Asn Asn Pro Glu Phe Arg Ala Leu Ile Ala Glu Pro Arg Met Gly Lys

500

505

510

Leu Ile Ser Ala Thr Val His Glu Asp Gly Cys Glu Val Ser Ile Arg

515

520

525

Leu Asn Tyr Ser Gln Val Ser Asn Lys Val Arg Lys Leu Arg Leu Arg

530

535

540

Glu Val Lys Gln Pro Ala Ser Ser Lys Gly Thr Lys Leu Val Ser Gly

545

550

555

560

Arg Pro Arg Ile His Thr Trp Gln Pro Glu Thr Phe Pro Ser

565

570

<210> 530

<211> 534

<212> PRT

<213> Homo sapiens

<400> 530

Met Gly Val Pro Thr Ala Val Ser Ala Thr Pro Val Arg Ala Asp Ala

1

5

10

15

Ser Ser Lys Pro Gln Pro Leu Leu Gln Ser Gln Pro His Leu Phe Phe

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 20 | | 25 | | 30 | | | | | | | | | | |
| Phe | Pro | Lys | Leu | Leu | Ser | Arg | Leu | Leu | Gly | Ser | Pro | Leu | Pro | Val | His |
| | 35 | | 40 | | 45 | | | | | | | | | | |
| Ser | Ala | Gly | Pro | Gly | Pro | Leu | Leu | Thr | Arg | Met | Pro | Gln | Ala | Thr | Thr |
| | 50 | | 55 | | 60 | | | | | | | | | | |
| Val | Ser | Leu | Arg | Leu | Gly | Ser | Trp | Ser | Leu | Thr | Glu | Asp | Arg | Asp | Val |
| 65 | | | 70 | | 75 | | | | | | | | | 80 | |
| Ser | Gly | Glu | Trp | Pro | Arg | Ala | Phe | Pro | Asp | Thr | Pro | Pro | Gly | Met | Thr |
| | | | 85 | | 90 | | | | | | | | 95 | | |
| Thr | Ser | Val | Phe | Pro | Val | Ala | Asp | Ala | Cys | His | Ser | Val | Lys | Ser | Leu |
| | 100 | | 105 | | 110 | | | | | | | | | | |
| Gln | Arg | Gln | Pro | Gly | Ala | Ser | Pro | Ser | Gln | Glu | Arg | Lys | Pro | Thr | Gly |
| | 115 | | 120 | | 125 | | | | | | | | | | |
| Val | Ser | Val | Ile | Tyr | Trp | Glu | Arg | Leu | Leu | Leu | Gly | Ser | Arg | Ser | Asp |
| 130 | | | 135 | | 140 | | | | | | | | | | |
| Gln | Ala | Ser | Ile | Ser | Leu | Arg | Leu | Thr | Ser | Pro | Leu | Arg | Pro | Pro | Lys |
| 145 | | | 150 | | 155 | | | | | | | | | 160 | |
| Ser | Ser | Arg | Pro | Arg | Glu | Lys | Thr | Phe | Thr | Glu | Tyr | Arg | Val | Pro | Gly |
| | | | 165 | | 170 | | | | | | | | 175 | | |
| Arg | Gln | Pro | Arg | Thr | Pro | Glu | Arg | Gln | Lys | Pro | Cys | Ala | Gln | Glu | Val |
| | 180 | | 185 | | 190 | | | | | | | | | | |
| Pro | Gly | Arg | Ala | Phe | Gly | Asn | Ala | Ser | Asp | Leu | Lys | Ala | Ala | Ser | Gly |
| | 195 | | 200 | | 205 | | | | | | | | | | |
| Gly | Arg | Asp | Arg | Arg | Met | Gly | Ala | Ala | Trp | Gln | Glu | Pro | His | Arg | Leu |
| 210 | | | 215 | | 220 | | | | | | | | | | |
| Leu | Gly | Gly | Gln | Glu | Pro | Ser | Thr | Trp | Asp | Glu | Leu | Gly | Glu | Ala | Leu |
| 225 | | | 230 | | 235 | | | | | | | | | 240 | |
| His | Ala | Gly | Glu | Lys | Ser | Phe | Glu | Cys | Arg | Ala | Cys | Ser | Lys | Val | Phe |
| | | | 245 | | 250 | | | | | | | | 255 | | |

Val Lys Ser Ser Asp Leu Leu Lys His Leu Arg Thr His Thr Gly Glu
 260 265 270
 Arg Pro Tyr Glu Cys Thr Gln Cys Gly Lys Ala Phe Ser Gln Thr Ser
 275 280 285
 His Leu Thr Gln His Gln Arg Ile His Ser Gly Glu Thr Pro Tyr Ala
 290 295 300
 Cys Pro Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu Val Arg
 305 310 315 320
 His Gln Arg Ile His Thr Ala Glu Lys Ser Phe Arg Cys Ser Glu Cys
 325 330 335
 Gly Lys Ala Phe Ser His Gly Ser Asn Leu Ser Gln His Arg Lys Ile
 340 345 350
 His Ala Gly Gly Arg Pro Tyr Ala Cys Ala Gln Cys Gly Arg Arg Phe
 355 360 365
 Cys Arg Asn Ser His Leu Ile Gln His Glu Arg Thr His Thr Gly Glu
 370 375 380
 Lys Pro Phe Val Cys Ala Leu Arg Gly Ala Ala Phe Ser Gln Gly Ser
 385 390 395 400
 Ser Leu Phe Leu His Gln Arg Val His Thr Gly Glu Lys Pro Phe Ala
 405 410 415
 Cys Ala Gln Cys Gly Arg Ser Phe Ser Arg Ser Ser Asn Leu Thr Gln
 420 425 430
 His Gln Leu Leu His Thr Gly Glu Arg Pro Phe Arg Cys Val Asp Cys
 435 440 445
 Gly Lys Gly Phe Ala Lys Gly Ala Val Leu Leu Ser His Arg Arg Ile
 450 455 460
 His Thr Gly Glu Lys Pro Phe Val Cys Thr Gln Cys Gly Arg Ala Phe
 465 470 475 480
 Arg Glu Arg Pro Ala Leu Leu His His Gln Arg Ile His Thr Thr Glu

| | | | | | |
|---|-----|--|-----|--|-----|
| | 485 | | 490 | | 495 |
| Lys Thr Asn Ala Ala Ala Pro Asp Cys Thr Pro Gly Pro Gly Phe Leu | | | | | |
| | 500 | | 505 | | 510 |
| Gln Gly His His Arg Lys Val Arg Arg Gly Gly Lys Pro Ser Pro Val | | | | | |
| | 515 | | 520 | | 525 |
| Leu Lys Pro Ala Lys Val | | | | | |
| | 530 | | | | |

<210> 531

<211> 1300

<212> PRT

<213> Homo sapiens

<400> 531

| | | | |
|---|-----|-----|-----|
| Met Pro Pro Asp Val Ile Arg Asp Ile Leu Glu Gly Val Leu Arg Leu | | | |
| 1 | 5 | 10 | 15 |
| Met Gly Ile Phe Asp Thr Ser Trp Val Ser Met Lys Ser Phe Leu Ala | | | |
| | 20 | 25 | 30 |
| Lys Arg Gly Val Arg Glu Asp Ile Ala Thr Phe Asp Ala Arg Asn Ile | | | |
| | 35 | 40 | 45 |
| Ser Lys Glu Ile Arg Glu Ser Val Glu Glu Leu Leu Phe Lys Asn Lys | | | |
| | 50 | 55 | 60 |
| Gly Ser Phe Asp Pro Lys Asn Ala Lys Arg Ala Ser Thr Ala Ala Ala | | | |
| | 65 | 70 | 75 |
| Pro Leu Ala Ala Trp Val Lys Ala Asn Ile Gln Tyr Ser His Val Leu | | | |
| | 85 | 90 | 95 |
| Glu Arg Ile His Pro Leu Glu Thr Glu Gln Ala Gly Leu Glu Ser Asn | | | |
| | 100 | 105 | 110 |

Leu Lys Lys Thr Glu Asp Arg Lys Arg Lys Leu Glu Glu Leu Leu Asn
 115 120 125
 Ser Val Gly Gln Lys Val Ser Glu Leu Lys Glu Lys Phe Gln Ser Arg
 130 135 140
 Thr Ser Glu Ala Ala Lys Leu Glu Ala Glu Val Ser Lys Ala Gln Glu
 145 150 155 160
 Thr Ile Lys Ala Ala Glu Val Leu Ile Asn Gln Leu Asp Arg Glu His
 165 170 175
 Lys Arg Trp Asn Ala Gln Val Val Glu Ile Thr Glu Glu Leu Ala Thr
 180 185 190
 Leu Pro Lys Arg Ala Gln Leu Ala Ala Ala Phe Ile Thr Tyr Leu Ser
 195 200 205
 Ala Ala Pro Glu Ser Leu Arg Lys Thr Cys Leu Glu Glu Trp Thr Lys
 210 215 220
 Ser Ala Gly Leu Glu Lys Phe Asp Leu Arg Arg Phe Leu Cys Thr Glu
 225 230 235 240
 Ser Glu Gln Leu Ile Trp Lys Ser Glu Gly Leu Pro Ser Asp Asp Leu
 245 250 255
 Ser Ile Glu Asn Ala Leu Val Ile Leu Gln Ser Arg Val Cys Pro Phe
 260 265 270
 Leu Ile Asp Pro Ser Ser Gln Ala Thr Glu Trp Leu Lys Thr His Leu
 275 280 285
 Lys Asp Ser Arg Leu Glu Val Ile Asn Gln Gln Asp Ser Asn Phe Ile
 290 295 300
 Thr Ala Leu Glu Leu Ala Val Arg Phe Gly Lys Thr Leu Ile Ile Gln
 305 310 315 320
 Glu Met Asp Gly Val Glu Pro Val Leu Tyr Pro Leu Leu Arg Arg Asp
 325 330 335
 Leu Val Ala Gln Gly Pro Arg Tyr Val Val Gln Ile Gly Asp Lys Ile

340 345 350
Ile Asp Tyr Asn Glu Glu Phe Arg Leu Phe Leu Ser Thr Arg Asn Pro
355 360 365
Asn Pro Phe Ile Pro Pro Asp Ala Ala Ser Ile Val Thr Glu Val Asn
370 375 380
Phe Thr Thr Thr Arg Ser Gly Leu Arg Gly Gln Leu Leu Ala Leu Thr
385 390 395 400
Ile Gln His Glu Lys Pro Asp Leu Glu Glu Gln Lys Thr Lys Leu Leu
405 410 415
Gln Gln Glu Glu Asp Lys Lys Ile Gln Leu Ala Lys Leu Glu Glu Ser
420 425 430
Leu Leu Glu Thr Leu Ala Thr Ser Gln Gly Asn Ile Leu Glu Asn Lys
435 440 445
Asp Leu Ile Glu Ser Leu Asn Gln Thr Lys Ala Ser Ser Ala Leu Ile
450 455 460
Gln Glu Ser Leu Lys Glu Ser Tyr Lys Leu Gln Ile Ser Leu Asp Gln
465 470 475 480
Glu Arg Asp Ala Tyr Leu Pro Leu Ala Glu Ser Ala Ser Lys Met Tyr
485 490 495
Phe Ile Ile Ser Asp Leu Ser Lys Ile Asn Asn Met Tyr Arg Phe Ser
500 505 510
Leu Ala Ala Phe Leu Arg Leu Phe Gln Arg Ala Leu Gln Asn Lys Gln
515 520 525
Asp Ser Glu Asn Thr Glu Gln Arg Ile Gln Ser Leu Ile Ser Ser Leu
530 535 540
Gln His Met Val Tyr Glu Tyr Ile Cys Arg Cys Leu Phe Lys Ala Asp
545 550 555 560
Gln Leu Met Phe Ala Leu His Phe Val Arg Gly Met His Pro Glu Leu
565 570 575

Phe Gln Glu Asn Glu Trp Asp Thr Phe Thr Gly Val Val Val Gly Asp
580 585 590

Met Leu Arg Lys Ala Asp Ser Gln Gln Lys Ile Arg Asp Gln Leu Pro
595 600 605

Ser Trp Ile Asp Gln Glu Arg Ser Trp Ala Val Ala Thr Leu Lys Ile
610 615 620

Ala Leu Pro Ser Leu Tyr Gln Thr Leu Cys Phe Glu Asp Ala Ala Leu
625 630 635 640

Trp Arg Thr Tyr Tyr Asn Asn Ser Met Cys Glu Gln Glu Phe Pro Ser
645 650 655

Ile Leu Ala Lys Lys Val Ser Leu Phe Gln Gln Ile Leu Val Val Gln
660 665 670

Ala Leu Arg Pro Asp Arg Leu Gln Ser Ala Met Ala Leu Phe Ala Cys
675 680 685

Lys Thr Leu Gly Leu Lys Glu Val Ser Pro Leu Pro Leu Asn Leu Lys
690 695 700

Arg Leu Tyr Lys Glu Thr Leu Glu Ile Glu Pro Ile Leu Ile Ile Ile
705 710 715 720

Ser Pro Gly Ala Asp Pro Ser Gln Glu Leu Gln Glu Leu Ala Asn Ala
725 730 735

Glu Arg Ser Gly Glu Cys Tyr His Gln Val Ala Met Gly Gln Gly Gln
740 745 750

Ala Asp Leu Ala Ile Gln Met Leu Lys Glu Cys Ala Arg Asn Gly Asp
755 760 765

Trp Leu Cys Leu Lys Asn Leu His Leu Val Val Ser Trp Leu Pro Val
770 775 780

Leu Glu Lys Glu Leu Asn Thr Leu Gln Pro Lys Asp Thr Phe Arg Leu
785 790 795 800

Trp Leu Thr Ala Glu Val His Pro Asn Phe Thr Pro Ile Leu Leu Gln

| | | | | | |
|---|------|------|------|------|------|
| | 805 | | 810 | | 815 |
| Ser Ser Leu Lys Ile Thr Tyr Glu Ser Pro Pro Gly Leu Lys Lys Asn | | | | | |
| | 820 | | 825 | | 830 |
| Leu Met Arg Thr Tyr Glu Ser Trp Thr Pro Glu Gln Ile Ser Lys Lys | | | | | |
| | 835 | | 840 | | 845 |
| Asp Asn Thr His Arg Ala His Ala Leu Phe Ser Leu Ala Trp Phe His | | | | | |
| | 850 | | 855 | | 860 |
| Ala Ala Cys Gln Glu Arg Arg Asn Tyr Ile Pro Gln Gly Trp Thr Lys | | | | | |
| 865 | | 870 | | 875 | 880 |
| Phe Tyr Glu Phe Ser Leu Ser Asp Leu Arg Ala Gly Tyr Asn Ile Ile | | | | | |
| | 885 | | 890 | | 895 |
| Asp Arg Leu Phe Asp Gly Ala Lys Asp Val Gln Trp Glu Phe Val His | | | | | |
| | 900 | | 905 | | 910 |
| Gly Leu Leu Glu Asn Ala Ile Tyr Gly Gly Arg Ile Asp Asn Tyr Phe | | | | | |
| | 915 | | 920 | | 925 |
| Asp Leu Arg Val Leu Gln Ser Tyr Leu Lys Gln Phe Phe Asn Ser Ser | | | | | |
| | 930 | | 935 | | 940 |
| Val Ile Asp Val Phe Asn Gln Arg Asn Lys Lys Ser Ile Phe Pro Tyr | | | | | |
| 945 | | 950 | | 955 | 960 |
| Ser Val Ser Leu Pro Gln Ser Cys Ser Ile Leu Asp Tyr Arg Ala Val | | | | | |
| | 965 | | 970 | | 975 |
| Ile Glu Lys Ile Pro Glu Asp Asp Lys Pro Ser Phe Phe Gly Leu Pro | | | | | |
| | 980 | | 985 | | 990 |
| Ala Asn Ile Ala Arg Ser Ser Gln Arg Met Ile Ser Ser Gln Val Ile | | | | | |
| | 995 | | 1000 | | 1005 |
| Ser Gln Leu Arg Ile Leu Gly Arg Ser Ile Thr Ala Gly Ser Lys Phe | | | | | |
| | 1010 | | 1015 | | 1020 |
| Asp Arg Glu Ile Trp Ser Asn Glu Leu Ser Pro Val Leu Asn Leu Trp | | | | | |
| 1025 | | 1030 | | 1035 | 1040 |

Lys Lys Leu Asn Gln Asn Ser Asn Leu Ile His Gln Lys Val Pro Pro

1045

1050

1055

Pro Asn Asp Arg Gln Gly Ser Pro Ile Leu Ser Phe Ile Ile Leu Glu

1060

1065

1070

Gln Phe Asn Ala Ile Arg Leu Val Gln Ser Val His Gln Ser Leu Ala

1075

1080

1085

Ala Leu Ser Lys Val Ile Arg Gly Thr Thr Leu Leu Ser Ser Glu Val

1090

1095

1100

Gln Lys Leu Ala Ser Ala Leu Leu Asn Gln Lys Cys Pro Leu Ala Trp

1105

1110

1115

1120

Gln Ser Lys Trp Glu Gly Pro Glu Asp Pro Leu Gln Tyr Leu Arg Gly

1125

1130

1135

Leu Val Ala Arg Ala Leu Ala Ile Gln Asn Trp Val Asp Lys Ala Glu

1140

1145

1150

Lys Gln Ala Leu Leu Ser Glu Thr Leu Asp Leu Ser Glu Leu Phe His

1155

1160

1165

Pro Asp Thr Phe Leu Asn Ala Leu Arg Gln Glu Thr Ala Arg Ala Val

1170

1175

1180

Gly Arg Ser Val Asp Ser Leu Lys Phe Val Ala Ser Trp Lys Gly Arg

1185

1190

1195

1200

Leu Gln Glu Ala Lys Leu Gln Ile Lys Ile Ser Gly Leu Leu Leu Glu

1205

1210

1215

Gly Cys Ser Phe Asp Gly Asn Gln Leu Ser Glu Asn Gln Leu Asp Ser

1220

1225

1230

Pro Ser Val Ser Ser Val Leu Pro Cys Phe Met Gly Trp Ile Pro Gln

1235

1240

1245

Asp Ala Cys Gly Pro Tyr Ser Pro Asp Glu Cys Ile Ser Leu Pro Val

1250

1255

1260

Tyr Thr Ser Ala Glu Arg Asp Arg Val Val Thr Asn Ile Asp Val Pro

1265 1270 1275 1280
 Cys Gly Gly Asn Gln Asp Gln Trp Ile Gln Cys Gly Ala Ala Leu Phe

 1285 1290 1295

Leu Lys Asn Gln

1300

<210> 532

<211> 944

<212> PRT

<213> Homo sapiens

<400> 532

Met Gly Ser Asp Gly Ile Leu Arg Leu Ser Thr Ser Ala Leu Asn Asn

1 5 10 15

Glu Phe Phe Ala Tyr Ala Ala Gln Gly Trp Lys Gln Arg Leu Ala Glu

20 25 30

Gly Glu Phe Thr Pro Glu Met Gln Leu Arg Ile Arg Gln Glu Ile Glu

35 40 45

Lys Glu Lys Lys Thr Glu Pro Trp Lys Glu Lys Phe Phe Glu Arg Phe

50 55 60

Tyr Gly Glu Lys Leu Gly Met Ser Arg Glu Glu Ser Val Lys Leu Thr

65 70 75 80

Thr Gly Pro Asn Asn Ala Gly Ala Gln Ser Ser Ser Ser Cys Gly Thr

85 90 95

Ser Gly Leu Pro Val Ser Ala Gln Thr Ala Leu Ala Glu Gln Gln Pro

100 105 110

Lys Ser Met Lys Ser Pro Ala Ser Pro Glu Pro Gly Phe Cys Ala Thr

115 120 125

Leu Cys Pro Met Val Glu Ile Pro Pro Lys Asp Ile Met Ala Glu Leu
 130 135 140
 Glu Ser Glu Asp Ile Leu Ile Pro Glu Glu Ser Val Ile Gln Glu Glu
 145 150 155 160
 Ile Ala Glu Glu Val Glu Thr Ser Ile Cys Glu Cys Gln Asp Glu Asn
 165 170 175
 His Lys Thr Ile Pro Glu Phe Ser Glu Glu Ala Glu Ser Leu Thr Asn
 180 185 190
 Ser His Glu Glu Pro Gln Ile Ala Pro Pro Glu Asp Asn Leu Glu Ser
 195 200 205
 Cys Val Met Met Asn Asp Val Leu Glu Thr Leu Pro His Ile Glu Val
 210 215 220
 Lys Ile Glu Gly Lys Ser Glu Ser Pro Gln Glu Glu Met Thr Val Val
 225 230 235 240
 Ile Asp Gln Leu Glu Val Cys Asp Ser Leu Ile Pro Ser Thr Ser Ser
 245 250 255
 Met Thr His Val Ser Asp Thr Glu His Lys Glu Ser Glu Thr Ala Val
 260 265 270
 Glu Thr Ser Thr Pro Lys Ile Lys Thr Gly Ser Ser Ser Leu Glu Gly
 275 280 285
 Gln Phe Pro Asn Glu Gly Ile Ala Ile Asp Met Glu Leu Gln Ser Asp
 290 295 300
 Pro Glu Glu Gln Leu Ser Glu Asn Ala Cys Ile Ser Glu Thr Ser Phe
 305 310 315 320
 Ser Ser Glu Ser Pro Glu Gly Ala Cys Thr Ser Leu Pro Ser Pro Gly
 325 330 335
 Gly Glu Thr Gln Ser Thr Ser Glu Glu Ser Cys Thr Pro Ala Ser Leu
 340 345 350
 Glu Thr Thr Phe Cys Ser Glu Val Ser Ser Thr Glu Asn Thr Asp Lys

355 360 365
Tyr Asn Gln Arg Asn Ser Thr Asp Glu Asn Phe His Ala Ser Leu Met
370 375 380
Ser Glu Ile Ser Pro Ile Ser Thr Ser Pro Glu Ile Ser Glu Ala Ser
385 390 395 400
Leu Met Ser Asn Leu Pro Leu Thr Ser Glu Ala Ser Pro Val Ser Asn
405 410 415
Leu Pro Leu Thr Ser Glu Thr Ser Pro Met Ser Asp Leu Pro Leu Thr
420 425 430
Ser Lys Thr Ser Ser Val Ser Ser Met Leu Leu Thr Ser Glu Thr Thr
435 440 445
Phe Val Ser Ser Leu Pro Leu Pro Ser Glu Thr Ser Pro Ile Ser Asn
450 455 460
Ser Ser Ile Asn Glu Arg Met Ala His Gln Gln Arg Lys Ser Pro Ser
465 470 475 480
Val Ser Glu Glu Pro Leu Ser Pro Gln Lys Asp Glu Ser Ser Ala Thr
485 490 495
Ala Lys Pro Leu Gly Glu Asn Leu Thr Ser Gln Gln Lys Asn Leu Ser
500 505 510
Asn Thr Pro Glu Pro Ile Ile Met Ser Ser Ser Ser Ile Ala Pro Glu
515 520 525
Ala Phe Pro Ser Glu Asp Leu His Asn Lys Thr Leu Ser Gln Gln Thr
530 535 540
Cys Lys Ser His Val Asp Thr Glu Lys Pro Tyr Pro Ala Ser Ile Pro
545 550 555 560
Glu Leu Ala Ser Thr Glu Met Ile Lys Val Lys Asn His Ser Val Leu
565 570 575
Gln Arg Thr Glu Lys Lys Val Leu Pro Ser Pro Leu Glu Leu Ser Val
580 585 590

Phe Ser Glu Gly Thr Asp Asn Lys Gly Asn Glu Leu Pro Ser Ala Lys
595 600 605

Leu Gln Asp Lys Gln Tyr Ile Ser Ser Val Asp Lys Ala Pro Phe Ser
610 615 620

Glu Gly Ser Arg Asn Lys Thr His Lys Gln Gly Ser Thr Gln Ser Arg
625 630 635 640

Leu Glu Thr Ser His Thr Ser Lys Ser Ser Glu Pro Ser Lys Ser Pro
645 650 655

Asp Gly Ile Arg Asn Glu Ser Arg Asp Ser Glu Ile Ser Lys Arg Lys
660 665 670

Thr Ala Glu Gln His Ser Phe Gly Ile Cys Lys Glu Lys Arg Ala Arg
675 680 685

Ile Glu Asp Asp Gln Ser Thr Arg Asn Ile Ser Ser Ser Ser Pro Pro
690 695 700

Glu Lys Glu Gln Pro Pro Arg Glu Glu Pro Arg Val Pro Pro Leu Lys
705 710 715 720

Ile Gln Leu Ser Lys Ile Gly Pro Pro Phe Ile Ile Lys Ser Gln Pro
725 730 735

Val Ser Lys Pro Glu Ser Arg Ala Ser Thr Ser Thr Ser Val Ser Gly
740 745 750

Gly Arg Asn Thr Gly Ala Arg Thr Leu Ala Asp Ile Lys Ala Arg Ala
755 760 765

Gln Gln Ala Arg Ala Gln Arg Glu Ala Ala Ala Ala Ala Val Ala
770 775 780

Ala Ala Ala Ser Ile Val Ser Gly Ala Met Gly Ser Pro Gly Glu Gly
785 790 795 800

Gly Lys Thr Arg Thr Leu Ala His Ile Lys Glu Gln Thr Lys Ala Lys
805 810 815

Leu Phe Ala Lys His Gln Ala Arg Ala His Leu Phe Gln Thr Ser Lys

<210> 533

<211> 1161

<212> PRT

<213> Homo sapiens

<400> 533

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Glu Ile Gln Glu Ala Ala Ala Thr Arg Gly Gln Trp Ala Leu Gly Ser
 50 55 60
 Ala Ser Ala Ser Pro Gly Glu Leu Cys Leu Val Gln Val Gly Leu Leu
 65 70 75 80
 Trp His Arg Cys Arg Val Val Ser Arg Gln Ala Gln Glu Ser Arg Val
 85 90 95
 Phe Leu Leu Asp Glu Gly Arg Thr Ile Thr Ala Gly Ala Gly Ser Leu
 100 105 110
 Ala Pro Gly Arg Arg Glu Phe Phe Asn Leu Pro Ser Glu Val Leu Gly
 115 120 125
 Cys Val Leu Ala Gly Leu Val Pro Ala Gly Cys Gly Ala Gly Ser Gly
 130 135 140
 Glu Pro Pro Gln His Trp Pro Ala Asp Ala Val Asp Phe Leu Ser Asn
 145 150 155 160
 Leu Gln Gly Lys Glu Val His Gly Cys Val Leu Asp Val Leu Leu Leu
 165 170 175
 His Arg Leu Val Leu Leu Glu Val Pro Asp Val Phe Gln Gln Met Arg
 180 185 190
 Glu Leu Gly Leu Ala Arg Arg Val Pro Asp Ser Leu Phe Arg Ser Leu
 195 200 205
 Leu Glu Arg Tyr Leu Thr Ala Ala Thr Ala Ser Val Gly Ser Gly Val
 210 215 220
 Pro Val Leu Ser Arg Val Pro Leu Lys Gln Lys Gln Pro Gly Leu Asp
 225 230 235 240
 Tyr Phe Tyr Pro Gln Leu Gln Leu Gly Val Thr Glu Ala Val Val Ile
 245 250 255
 Thr Gln Val Cys His Pro His Arg Ile His Cys Gln Leu Arg Ser Val
 260 265 270
 Ser Gln Glu Ile His Arg Leu Ser Glu Ser Met Ala Gln Val Tyr Arg

| | | |
|---|-----|-----|
| 275 | 280 | 285 |
| Gly Ser Thr Gly Thr Gly Asp Glu Asn Ser Thr Ser Ala Thr Trp Glu | | |
| 290 | 295 | 300 |
| Glu Arg Glu Glu Ser Pro Asp Lys Pro Gly Ser Pro Cys Ala Ser Cys | | |
| 305 | 310 | 315 |
| Gly Leu Asp Gly His Trp Tyr Arg Ala Leu Leu Leu Glu Thr Phe Arg | | |
| 325 | 330 | 335 |
| Pro Gln Arg Cys Ala Gln Val Leu His Val Asp Tyr Gly Arg Lys Glu | | |
| 340 | 345 | 350 |
| Leu Val Ser Cys Ser Ser Leu Arg Tyr Leu Leu Pro Glu Tyr Phe Arg | | |
| 355 | 360 | 365 |
| Met Pro Val Val Thr Tyr Pro Cys Ala Leu Tyr Gly Leu Trp Asp Gly | | |
| 370 | 375 | 380 |
| Gly Arg Gly Trp Ser Arg Ser Gln Val Gly Asp Leu Lys Thr Leu Ile | | |
| 385 | 390 | 395 |
| Leu Gly Lys Ala Val Asn Ala Lys Ile Glu Phe Tyr Cys Ser Phe Glu | | |
| 405 | 410 | 415 |
| His Val Tyr Tyr Val Ser Leu Tyr Gly Glu Asp Gly Ile Asn Leu Asn | | |
| 420 | 425 | 430 |
| Arg Val Phe Gly Val Gln Ser Cys Cys Leu Ala Asp Arg Val Leu Gln | | |
| 435 | 440 | 445 |
| Ser Gln Ala Thr Glu Glu Glu Glu Pro Glu Thr Ser Gln Ser Gln Ser | | |
| 450 | 455 | 460 |
| Pro Ala Glu Glu Val Asp Glu Glu Ile Ser Leu Pro Ala Leu Arg Ser | | |
| 465 | 470 | 475 |
| Ile Arg Leu Lys Met Asn Ala Phe Tyr Asp Ala Gln Val Glu Phe Val | | |
| 485 | 490 | 495 |
| Lys Asn Pro Ser Glu Phe Trp Ile Arg Leu Arg Lys His Asn Val Thr | | |
| 500 | 505 | 510 |

Phe Ser Lys Leu Met Arg Arg Met Cys Gly Phe Tyr Ser Ser Ala Ser
515 520 525
Lys Leu Asp Gly Val Val Leu Lys Pro Glu Pro Asp Asp Leu Cys Cys
530 535 540
Val Lys Trp Lys Glu Asn Gly Tyr Tyr Arg Ala Ile Val Thr Lys Leu
545 550 555 560
Asp Asp Lys Ser Val Asp Val Phe Leu Val Asp Arg Gly Asn Ser Glu
565 570 575
Asn Val Asp Trp Tyr Asp Val Arg Met Leu Leu Pro Gln Phe Arg Gln
580 585 590
Leu Pro Ile Leu Ala Val Lys Cys Thr Leu Ala Asp Ile Trp Pro Leu
595 600 605
Gly Lys Thr Trp Ser Gln Glu Ala Val Ser Phe Phe Lys Lys Thr Val
610 615 620
Leu His Lys Glu Leu Val Ile His Ile Leu Asp Lys Gln Asp His Gln
625 630 635 640
Tyr Val Ile Glu Ile Leu Asp Glu Ser Arg Thr Gly Glu Glu Asn Ile
645 650 655
Ser Lys Val Ile Ala Gln Ala Gly Tyr Ala Lys Tyr Gln Glu Phe Glu
660 665 670
Thr Lys Glu Asn Ile Leu Val Asn Ala His Ser Pro Gly His Val Ser
675 680 685
Asn His Phe Thr Thr Glu Ser Asn Lys Ile Pro Phe Ala Lys Thr Gly
690 695 700
Glu Gly Glu Gln Lys Ala Lys Arg Glu Asn Lys Thr Thr Ser Val Ser
705 710 715 720
Lys Ala Leu Ser Asp Thr Thr Val Val Thr Asn Gly Ser Thr Glu Leu
725 730 735
Val Val Gln Glu Lys Val Lys Arg Ala Ser Val Tyr Phe Pro Leu Met

740 745 750
Gln Asn Cys Leu Glu Ile Lys Pro Gly Ser Ser Ser Lys Gly Glu Leu
755 760 765
Glu Val Gly Ser Thr Val Glu Val Arg Val Ser Tyr Val Glu Asn Pro
770 775 780
Gly Tyr Phe Trp Cys Gln Leu Thr Arg Asn Ile Gln Gly Leu Lys Thr
785 790 795 800
Leu Met Ser Asp Ile Gln Tyr Tyr Cys Lys Asn Thr Ala Ala Pro His
805 810 815
Gln Arg Asn Thr Leu Ala Cys Leu Ala Lys Arg Thr Val Asn Arg Gln
820 825 830
Trp Ser Arg Ala Leu Ile Ser Gly Ile Gln Ser Val Glu His Val Asn
835 840 845
Val Thr Phe Val Asp Tyr Gly Asp Arg Glu Met Val Ser Val Lys Asn
850 855 860
Ile Tyr Ser Ile Ser Glu Glu Phe Leu Lys Val Lys Ala Gln Ala Phe
865 870 875 880
Arg Cys Ser Leu Tyr Asn Leu Ile Gln Pro Val Gly Gln Asn Pro Phe
885 890 895
Val Trp Asp Val Lys Ala Ile Gln Ala Phe Asn Glu Phe Ile Asp Asn
900 905 910
Ala Trp Gln Lys Asn Leu Glu Leu Lys Cys Thr Ile Phe Ala Leu Ala
915 920 925
Ser Ile Asn Glu Glu Leu Phe Asn Ile Val Asp Leu Leu Thr Pro Phe
930 935 940
Gln Ser Ala Cys His Phe Leu Val Glu Lys Arg Leu Ala Arg Pro Val
945 950 955 960
Lys Leu Gln Lys Pro Leu Glu Ser Ser Val Gln Leu His Ser Tyr Phe
965 970 975

Tyr Ser Thr His Asp Met Lys Ile Gly Ser Glu Glu Leu Val Tyr Ile
980 985 990

Thr His Ile Asp Asp Pro Trp Thr Phe Tyr Cys Gln Leu Ala Arg Asn
995 1000 1005

Ala Asn Ile Leu Glu Gln Leu Ser Cys Ser Ile Thr Gln Leu Ser Lys
1010 1015 1020

Val Leu Leu Asn Leu Lys Thr Ser Pro Leu Asn Pro Gly Thr Leu Cys
1025 1030 1035 1040

Leu Ala Lys Tyr Thr Asp Gly Asn Trp Tyr Arg Gly Ile Val Ile Glu
1045 1050 1055

Lys Glu Pro Lys Lys Val Phe Phe Val Asp Phe Gly Asn Ile Tyr Val
1060 1065 1070

Val Thr Ser Asp Asp Leu Leu Pro Ile Pro Ser Asp Ala Tyr Asp Val
1075 1080 1085

Leu Leu Leu Pro Met Gln Ala Val Arg Cys Ser Leu Ser Asp Ile Pro
1090 1095 1100

Asp His Ile Pro Glu Glu Val Val Val Trp Phe Gln Glu Thr Ile Leu
1105 1110 1115 1120

Asp Lys Ser Leu Lys Ala Leu Val Val Ala Lys Asp Pro Asp Gly Thr
1125 1130 1135

Leu Ile Ile Glu Leu Tyr Gly Asp Asn Ile Gln Ile Ser Ala Ser Ile
1140 1145 1150

Asn Lys Lys Leu Gly Leu Leu Ser Tyr
1155 1160

<210> 534

<211> 762

<212> PRT

<213> Homo sapiens

<400> 534

Met Gly Asp Leu Lys Ser Gly Phe Glu Glu Val Asp Gly Val Arg Leu

1 5 10 15

Gly Tyr Leu Ile Ile Lys Gly Lys Gln Met Phe Ala Leu Ser Gln Val

20 25 30

Phe Thr Asp Leu Leu Lys Asn Ile Pro Arg Thr Thr Val His Lys Arg

35 40 45

Met Asp His Leu Lys Val Lys Lys His His Cys Asp Leu Glu Glu Leu

50 55 60

Arg Lys Leu Lys Ala Ile Asn Ser Ile Ala Phe His Ala Ala Lys Cys

65 70 75 80

Thr Leu Ile Ser Arg Glu Asp Val Glu Ala Leu Tyr Thr Ser Cys Lys

85 90 95

Thr Glu Arg Val Leu Lys Thr Lys Arg Arg Arg Val Gly Arg Ala Leu

100 105 110

Ala Thr Lys Ala Pro Pro Pro Glu Arg Ala Ala Ala Ala Ser Pro Arg

115 120 125

Pro Gly Phe Trp Lys Asp Lys His Gln Leu Trp Arg Gly Leu Ser Gly

130 135 140

Ala Ala Arg Pro Leu Pro Ile Ser Ala Gln Ser Gln Arg Pro Gly Ala

145 150 155 160

Ala Ala Ala Arg Pro Ala Ala His Leu Pro Gln Ile Phe Ser Lys Tyr

165 170 175

Pro Gly Ser His Tyr Pro Glu Ile Val Arg Ser Pro Cys Lys Pro Pro

180 185 190

Leu Asn Tyr Glu Thr Ala Pro Leu Gln Gly Asn Tyr Val Ala Phe Pro

195 200 205

Ser Asp Pro Ala Tyr Phe Arg Ser Leu Leu Cys Ser Lys His Pro Ala
 210 215 220
 Ala Ala Ala Ala Gly Ala Thr Cys Leu Glu Arg Phe His Leu Val Asn
 225 230 235 240
 Gly Phe Cys Pro Pro Pro His His His His His His His His His
 245 250 255
 His His His His His Arg Ala Gln Pro Pro Gln Gln Ser His His Pro
 260 265 270
 Pro His His His Arg Pro Gln Pro His Leu Gly Ser Phe Pro Glu Ser
 275 280 285
 Cys Ser Ser Asp Ser Glu Ser Ser Ser Tyr Ser Asp His Ala Ala Asn
 290 295 300
 Asp Ser Asp Phe Gly Ser Ser Leu Ser Ser Ser Ser Asn Ser Val Ser
 305 310 315 320
 Ser Glu Glu Glu Glu Glu Glu Gly Glu Glu Glu Glu Glu Glu Glu
 325 330 335
 Glu Glu Glu Glu Gly Gly Ser Gly Ala Ser Asp Ser Ser Glu Val Ser
 340 345 350
 Ser Glu Glu Glu Asp Ser Ser Thr Glu Ser Asp Ser Ser Ser Gly Ser
 355 360 365
 Ser Gln Val Ser Val Gln Ser Ile Arg Phe Arg Arg Thr Ser Phe Cys
 370 375 380
 Lys Pro Pro Ser Val Gln Ala Gln Ala Asn Phe Leu Tyr His Leu Ala
 385 390 395 400
 Ser Ala Ala Ala Ala Thr Lys Pro Ala Ala Phe Glu Asp Ala Gly Arg
 405 410 415
 Leu Pro Asp Leu Lys Ser Ser Val Lys Ala Glu Ser Pro Ala Glu Trp
 420 425 430
 Asn Leu Gln Ser Trp Ala Pro Lys Ala Ser Pro Val Tyr Cys Pro Ala

| | | |
|---|-----|-----|
| 435 | 440 | 445 |
| Ser Leu Gly Ser Cys Phe Ala Glu Ile Arg Asn Asp Arg Val Ser Glu | | |
| 450 | 455 | 460 |
| Ile Thr Phe Pro His Ser Glu Ile Ser Asn Ala Val Lys Arg Thr Asp | | |
| 465 | 470 | 475 |
| Leu Thr Ile Asn Cys Leu Ala Glu Gly Ala Ser Ser Pro Ser Pro Lys | | |
| 485 | 490 | 495 |
| Thr Asn Asn Ala Phe Pro Gln Gln Arg Ile Leu Arg Glu Ala Arg Lys | | |
| 500 | 505 | 510 |
| Cys Leu Gln Thr Thr Pro Thr Thr His Cys Ala Asp Asn Asn Thr Ile | | |
| 515 | 520 | 525 |
| Ala Ala Arg Phe Leu Asn Asn Asp Ser Ser Gly Ala Glu Ala Asn Ser | | |
| 530 | 535 | 540 |
| Glu Lys Tyr Ser Lys Ile Leu His Cys Pro Glu Phe Ala Thr Asp Leu | | |
| 545 | 550 | 555 |
| Pro Ser Ser Gln Thr Asp Pro Glu Val Asn Ala Ala Gly Ala Ala Ala | | |
| 565 | 570 | 575 |
| Thr Lys Ala Glu Asn Pro Cys Thr Asp Thr Gly Asp Lys Thr Leu Pro | | |
| 580 | 585 | 590 |
| Phe Leu His Asn Ile Lys Ile Lys Val Glu Asp Ser Ser Ala Asn Glu | | |
| 595 | 600 | 605 |
| Glu Tyr Glu Pro His Leu Phe Thr Asn Lys Leu Lys Cys Glu Cys Asn | | |
| 610 | 615 | 620 |
| Asp Thr Lys Gly Glu Phe Tyr Ser Val Thr Glu Ser Lys Glu Glu Asp | | |
| 625 | 630 | 635 |
| Ala Leu Leu Thr Thr Ala Lys Glu Gly Phe Ala Cys Pro Glu Lys Glu | | |
| 645 | 650 | 655 |
| Thr Pro Ser Leu Asn Pro Leu Ala Gln Ser Gln Gly Leu Ser Cys Thr | | |
| 660 | 665 | 670 |

Leu Gly Ser Pro Lys Pro Glu Asp Gly Glu Tyr Lys Phe Gly Ala Arg

675

680

685

Val Arg Lys Asn Tyr Arg Thr Leu Val Leu Gly Lys Arg Pro Val Leu

690

695

700

Gln Thr Pro Pro Val Lys Pro Asn Leu Lys Ser Ala Arg Ser Pro Arg

705

710

715

720

Pro Thr Gly Lys Thr Glu Thr Asn Glu Gly Thr Leu Asp Asp Phe Thr

725

730

735

Val Ile Asn Arg Arg Lys Lys Val Ala Ser Asn Val Ala Ser Ala Val

740

745

750

Lys Arg Pro Phe His Phe Met Ala Asn Lys

755

760

<210> 535

<211> 619

<212> PRT

<213> Homo sapiens

<400> 535

Met Glu Gly Asp Ala Glu Thr Asn Val Leu Glu Cys Ala Asn Gln Arg

1

5

10

15

Leu Val Ile Ser Glu Thr Asp Gly Glu Ile Leu Thr Pro Gly Trp Asp

20

25

30

Thr Gln Asp Arg Met Gly Val Glu Ser Arg Thr Asn Ile Gln Glu Leu

35

40

45

Gly Asn Arg Asn Gln Arg Glu Ala Gly Gly Glu Asn Leu Pro Glu Thr

50

55

60

Gln Ala His Met Gly Glu Asn Gln Glu Gln Leu Arg Cys Lys Ile Asp

| | | | |
|---|-----|-----|-----|
| 65 | 70 | 75 | 80 |
| Ala Glu Thr Gln Thr Pro Glu Trp Glu Asn Gln Asp Lys Asn Gly Ser | | | |
| | 85 | 90 | 95 |
| Glu Asp Ala Val Glu Thr Gln Thr Phe Glu Lys Lys Asp Lys Lys Glu | | | |
| | 100 | 105 | 110 |
| Ala Gly Glu Glu Asp Gly Glu Glu Ile Gln Ala Gln Gly Leu Gly Lys | | | |
| | 115 | 120 | 125 |
| Gln Gly Gln Thr Gly Asp Glu Asn Gly Glu Glu Thr Gln Thr Pro Gln | | | |
| | 130 | 135 | 140 |
| Trp Glu Lys Gln Asp Gln Met Lys Gly Asp Ala Asp Val Glu Ile Gln | | | |
| 145 | 150 | 155 | 160 |
| Met Glu Glu Gly Arg Asn Lys Asp Gln Val Gly Gly Gln Asp Ala Ala | | | |
| | 165 | 170 | 175 |
| Gln Thr Gln Ser Cys Gly Arg Glu Asn Val Gly Glu Val Lys Lys Glu | | | |
| | 180 | 185 | 190 |
| Asn Ser Val Glu Thr Gln Ala Leu Asp Trp Gly Lys Gln Glu Cys Val | | | |
| | 195 | 200 | 205 |
| Gly Asn Gly Asn Val Thr Glu Ile Gln Thr Pro Arg Trp Glu Lys His | | | |
| | 210 | 215 | 220 |
| Asp Gln Gly Gly Ser Lys Lys Ala Lys Lys Thr Gln Ala Ser Gly Gly | | | |
| 225 | 230 | 235 | 240 |
| Glu Asn Gln Lys Gln Leu Ser His Glu Ile Gln Val Gly Trp Gly Asn | | | |
| | 245 | 250 | 255 |
| Lys Gly Leu Arg Arg Asp Glu Asp Ala Lys Glu Thr Gln Ile Ala Thr | | | |
| | 260 | 265 | 270 |
| Lys Lys Lys Leu Arg Glu Ile Arg Glu Lys Asp Trp Val Val Ile Gln | | | |
| | 275 | 280 | 285 |
| Ala Leu Trp Trp Gly Asn Arg Arg Gln Val Ala Ser Glu Ile Tyr Arg | | | |
| | 290 | 295 | 300 |

Glu Phe Glu Ile Leu Cys Trp Glu Asn Gln Asn Trp Ile Gly Gly Glu
 305 310 315 320
 His Arg Ala Glu Ile Gln Ala Ser Glu Lys Arg Asp Gln Arg Lys Asp
 325 330 335
 Gly Cys Glu Asp Gly Thr Asn Ile Leu Ala Pro Glu Ala Glu Ile Gln
 340 345 350
 Glu Gln Leu Lys Gly Glu Thr Asp Val Glu Thr Gln Ser Asn Glu Pro
 355 360 365
 Leu Arg Glu Glu Asp Gly Thr Asp Ile Gln Ser Leu Gly Arg Arg Glu
 370 375 380
 Val Lys Gly Glu Asp Asp Lys Asp Thr Gln Glu Leu Gly Arg Lys Asn
 385 390 395 400
 Gln Gly Gln Leu Gly Asn Glu Phe Ser Gly Lys Ile His Ile Pro Lys
 405 410 415
 Gly Lys Asn Gln Glu His Ile Arg Gly Glu Asp Gly Ala His Thr Gln
 420 425 430
 Ile Ser Glu Ser Gly Asn Trp Gly Lys Leu Thr Ser Gln Ile Asp Gly
 435 440 445
 Glu Met His Ser Ala Glu Trp Lys Lys Asp Gln Gln Ile Gly Gly Glu
 450 455 460
 Asn Gly Ala Glu Ile Gln Ile Gln Gly Lys Arg Asn Leu Arg Glu Val
 465 470 475 480
 Gly Gly Glu Asp Gly Val Lys Thr Trp Ala Pro Gly Lys Glu Thr Gln
 485 490 495
 Ser Gln Phe Arg Ser Asp Leu Gly Arg Lys Ile Leu Leu Ser Glu Trp
 500 505 510
 Lys Ser Gln Lys Gln Met Gly Ser Glu Asn Gly Thr Glu Ile Gln Ala
 515 520 525
 Pro Val Glu Arg Asn Gln Arg Glu Pro Gly Gly Glu Asp Gly Val Lys

530 535 540
 Thr Gln Arg Pro Lys Arg Glu Asn Glu Asp Gln Leu Asp Ser Glu Ile
 545 550 555 560
 Gly Gly Ser His Ser Pro Gly Arg Arg Asn Trp Glu Leu Ile Gly Lys
 565 570 575
 Asp Val Ala Glu Asn Gln Ala Ser Glu Lys Arg Asn Gln Arg Glu Val
 580 585 590
 Gly Asn Glu Asp Gly Arg Met Ile Trp Arg Leu Arg Gly Lys Asn Trp
 595 600 605
 Arg Leu Arg Ala Lys Lys Gln Thr Val Lys Lys
 610 615

<210> 536

<211> 164

<212> PRT

<213> Homo sapiens

<400> 536

Met Asn Val Leu Val Trp Glu Asp Cys Ile Ala Glu Gln Ala Glu Val
 1 5 10 15
 Leu His Asn Asp Ser Tyr Gly Val Ile Ile Asp Cys Ser Pro Lys Gly
 20 25 30
 Met Phe Ser Leu Asn Cys Thr Ser Gln Ser Ala Cys His Gly His Thr
 35 40 45
 Met Phe Ser Trp Ser Glu Gln Asn Gly Gln Met Val Glu Met Ile Arg
 50 55 60
 Ser Met Ala Arg Val Pro Ile Ile Trp Lys His Gly Gly Ile Val Ala
 65 70 75 80

Pro Gln Pro Gln Met Ile Trp Pro Ala Val Gly Ala Lys His Lys Asp
 85 90 95
 Leu Trp Lys Leu Leu Met Ala Leu Asn Lys Ile Lys Ile Trp Glu Arg
 100 105 110
 Ile Lys Lys His Leu Glu Gly His Ser Arg Asn Leu Asp Ile Ala Lys
 115 120 125
 Leu Lys Glu Gln Ile Phe Lys Ala Ser Gln Ala His Leu Thr Leu Met
 130 135 140
 Pro Gly Thr Gly Val Leu Glu Gly Ala Ala Asp Gly Leu Ala Ala Ile
 145 150 155 160
 Asn Pro Leu Lys

<210> 537

<211> 236

<212> PRT

<213> Homo sapiens

<400> 537

Met Ser Ser Thr Glu Ser Ala Gly Arg Thr Ala Asp Lys Ser Pro Arg
 1 5 10 15
 Gln Gln Val Asp Arg Leu Leu Val Gly Leu Arg Trp Arg Arg Leu Glu
 20 25 30
 Glu Pro Leu Gly Phe Ile Lys Val Leu Gln Trp Leu Phe Ala Ile Phe
 35 40 45
 Ala Phe Gly Ser Cys Gly Ser Tyr Ser Gly Glu Thr Gly Ala Met Val
 50 55 60
 Arg Cys Asn Asn Glu Ala Lys Asp Val Ser Ser Ile Ile Val Ala Phe

| | | | |
|---|-----|-----|-----|
| 65 | 70 | 75 | 80 |
| Gly Tyr Pro Phe Arg Leu His Arg Ile Gln Tyr Glu Met Pro Leu Cys | | | |
| | 85 | 90 | 95 |
| Asp Glu Gly Ser Ser Ser Lys Thr Met His Leu Met Gly Asp Phe Ser | | | |
| 100 | 105 | 110 | |
| Ala Pro Ala Glu Phe Phe Val Thr Leu Gly Ile Phe Ser Phe Phe Tyr | | | |
| 115 | 120 | 125 | |
| Thr Met Ala Ala Leu Val Ile Tyr Leu Arg Phe His Asn Leu Tyr Thr | | | |
| 130 | 135 | 140 | |
| Glu Asn Lys Arg Phe Pro Leu Val Asp Phe Cys Val Thr Val Ser Phe | | | |
| 145 | 150 | 155 | 160 |
| Thr Phe Phe Trp Leu Val Ala Ala Ala Ala Trp Gly Lys Gly Leu Thr | | | |
| 165 | 170 | 175 | |
| Asp Val Lys Gly Ala Thr Arg Pro Ser Ser Leu Thr Ala Ala Met Ser | | | |
| 180 | 185 | 190 | |
| Val Cys His Gly Glu Glu Ala Val Cys Ser Ala Gly Ala Thr Pro Ser | | | |
| 195 | 200 | 205 | |
| Met Gly Leu Ala Asn Ile Ser Val Val Arg Pro Val Ala Thr Ala Gly | | | |
| 210 | 215 | 220 | |
| Ser Ser Thr Ser Pro Ala Ala Gln Ala Cys Pro Ser | | | |
| 225 | 230 | 235 | |

<210> 538

<211> 390

<212> PRT

<213> Homo sapiens

<400> 538

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Ile | Cys | His | Leu | Pro | Cys | Arg | Pro | Val | Lys | Pro | Asn | Ile | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Glu | Gln | Ile | Thr | Ser | Lys | Met | Gly | Ala | His | Tyr | His | Cys | Ile | Ile |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Cys | Ser | Ala | Thr | Ile | Thr | Arg | Arg | Thr | Asp | Met | Leu | Gly | His | Val | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | His | Met | Asn | Lys | Gly | Glu | Thr | Lys | Ser | Ser | Tyr | Ile | Ala | Ala | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Ala | Lys | Pro | Pro | Lys | Glu | Ile | Leu | Lys | Glu | Ala | Asp | Thr | Asp | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gln | Val | Cys | Pro | Asn | Tyr | Ser | Ile | Pro | Gln | Lys | Thr | Asp | Ser | Tyr | Phe |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asn | Pro | Lys | Met | Lys | Leu | Asn | Arg | Gln | Leu | Ile | Phe | Cys | Thr | Leu | Ala |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Ala | Leu | Ala | Glu | Glu | Arg | Lys | Pro | Leu | Glu | Cys | Leu | Asp | Ala | Phe | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Thr | Gly | Ile | Met | Gly | Leu | Gln | Trp | Ala | Lys | His | Leu | Gly | Asn | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Lys | Val | Thr | Ile | Asn | Asp | Leu | Asn | Glu | Asn | Ser | Val | Thr | Leu | Ile |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Gln | Glu | Ser | Cys | His | Leu | Asn | Lys | Leu | Lys | Val | Val | Val | Asp | Ser | Lys |
| | | | | 165 | | | | | 170 | | | | 175 | | |
| Glu | Lys | Glu | Lys | Ser | Asp | Asp | Ile | Leu | Glu | Glu | Gly | Glu | Lys | Asn | Leu |
| | | 180 | | | | | | 185 | | | | 190 | | | |
| Gly | Asn | Ile | Lys | Val | Thr | Lys | Met | Asp | Ala | Asn | Val | Leu | Met | His | Leu |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Arg | Ser | Phe | Asp | Phe | Ile | His | Leu | Asp | Pro | Phe | Gly | Thr | Ser | Val | Asn |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Tyr | Leu | Asp | Ser | Ala | Phe | Arg | Asn | Ile | Arg | Asn | Leu | Gly | Ile | Val | Ser |

225 230 235 240
Val Thr Ser Thr Asp Ile Ser Ser Leu Tyr Ala Lys Ala Gln His Val
 245 250 255
Ala Arg Arg His Tyr Gly Cys Asn Ile Val Arg Thr Glu Tyr Tyr Lys
 260 265 270
Glu Leu Ala Ala Arg Ile Val Val Ala Ala Val Ala Arg Ala Ala Ala
 275 280 285
Arg Cys Asn Lys Gly Ile Glu Val Leu Phe Ala Val Ala Leu Glu His
 290 295 300
Phe Val Leu Val Val Val Arg Val Leu Arg Gly Pro Thr Ser Ala Asp
305 310 315 320
Glu Thr Ala Lys Lys Ile Gln Tyr Leu Ile His Cys Gln Trp Cys Glu
 325 330 335
Glu Arg Ile Phe Gln Lys Asp Gly Asn Met Val Glu Asp Tyr Ser Ala
 340 345 350
Asn Phe Val Ile Ser Tyr Thr Gly Phe Pro Phe Val Asn Arg Gln Asp
 355 360 365
Ile Arg Lys Thr His Ile Asp Ser Cys Leu Val Thr Val Met Glu Ala
 370 375 380
Cys Leu Glu Arg Gln Gln
385 390

<210> 539

<211> 619

<212> PRT

<213> Homo sapiens

<400> 539

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Arg | Leu | Gln | Arg | Arg | Ala | Ser | Gln | Arg | Arg | Gln | Gly | Gly | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Trp | Gly | Leu | Arg | Val | Val | Gln | Glu | Pro | Gly | Gly | His | Leu | Tyr | Ile | Trp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Ala | Ser | Glu | Lys | Ala | His | Glu | Arg | Gln | Arg | Ala | Val | His | Ser | Cys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Met | Ile | Leu | Leu | Lys | Phe | Leu | Asn | His | Asn | Gly | Tyr | Leu | Asp | Pro | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Asp | Phe | Lys | Arg | Ile | Gly | Gln | Leu | Val | Gly | Ile | Leu | Gly | Met | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Cys | Gln | Asp | Pro | Asp | Arg | Ala | Thr | Gln | Arg | Cys | Ser | Leu | Glu | Gly | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | His | Leu | Tyr | Gln | Leu | Leu | Met | Cys | His | Lys | Arg | Glu | Ala | Leu | Gln |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| Ala | Glu | Ser | Gln | Ala | Pro | Lys | Glu | Leu | Ser | Gln | Ala | His | Ser | Asp | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Pro | Leu | Trp | Asn | Ser | Arg | Asp | Gln | Lys | Ala | Thr | Pro | Leu | Gly | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gln | Glu | Met | Ala | Lys | Asn | His | Ile | Phe | Gln | Leu | Cys | Ser | Phe | Gln | Val |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Ile | Lys | Asp | Ile | Met | Gln | Gln | Leu | Thr | Leu | Ala | Glu | Leu | Ser | Asp | Leu |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Ile | Trp | Thr | Ala | Ile | Asp | Gly | Leu | Gly | Ser | Thr | Ser | Pro | Phe | Arg | Val |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Gln | Ala | Ala | Ser | Glu | Met | Leu | Leu | Thr | Ala | Val | Gln | Glu | His | Gly | Ala |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Lys | Leu | Glu | Ile | Val | Ser | Ser | Met | Ala | Gln | Ala | Ile | Arg | Leu | Arg | Leu |
| | 210 | | | | | | 215 | | | | | 220 | | | |
| Cys | Ser | Val | His | Ile | Pro | Gln | Ala | Lys | Glu | Lys | Thr | Leu | His | Ala | Ile |

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Phe Leu Tyr Ser Pro Val Leu Leu Glu Val Leu Pro Lys Gln Ala Ala
 465 470 475 480
 Leu Thr Val Leu Ala Gln Gly Leu His Asp Pro Ser Pro Glu Val Arg
 485 490 495
 Val Leu Ser Leu Gln Gly Leu Ser Asn Ile Leu Phe His Pro Asp Lys
 500 505 510
 Glu Arg Asp Gly Ile Arg Ala Ala Ala Met Ala Leu Phe Gly Asp Leu
 515 520 525
 Val Ala Ala Met Ala Asp Arg Glu Leu Ser Gly Leu Arg Thr Gln Val
 530 535 540
 His Gln Ser Met Val Pro Leu Leu Leu His Leu Lys Asp Gln Cys Pro
 545 550 555 560
 Ala Val Ala Thr Gln Ala Lys Phe Thr Phe Tyr Arg Cys Ala Val Leu
 565 570 575
 Leu Arg Trp Arg Leu Leu His Thr Leu Phe Cys Thr Leu Ala Trp Glu
 580 585 590
 Arg Gly Leu Ser Ala Arg His Phe Leu Trp Thr Cys Leu Ala Thr Pro
 595 600 605
 Ser Ala Thr Thr Pro Arg Pro Cys Ser Arg Cys
 610 615

<210> 540

<211> 1103

<212> PRT

<213> Homo sapiens

<400> 540

Met His Phe Leu Ala Ala Gln Asn Gln Phe Leu His Ser Pro Phe Leu

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| Glu Arg Pro Met Asp Met Pro Tyr Met Ile Phe Asp Pro Asn Asn Pro | | | |
| 20 | 25 | 30 | |
| Leu Met Thr Gly Gln Leu Leu Gly Ser Ser Leu Thr Gln Met Pro Pro | | | |
| 35 | 40 | 45 | |
| Gln Ala Ser Ser Ser His Thr Thr Ala Pro Thr Thr Val Ala Ala Ser | | | |
| 50 | 55 | 60 | |
| Leu Lys Arg Lys Leu Asp Asp Lys Glu Asp Asn Asn Cys Ser Glu Lys | | | |
| 65 | 70 | 75 | 80 |
| Glu Gly Gly Asn Ser Gly Glu Asp Gln His Arg Asp Lys Arg Leu Arg | | | |
| 85 | 90 | 95 | |
| Thr Thr Ile Thr Pro Glu Gln Leu Glu Ile Leu Tyr Glu Lys Tyr Leu | | | |
| 100 | 105 | 110 | |
| Leu Asp Ser Asn Pro Thr Arg Lys Met Leu Asp His Ile Ala Arg Glu | | | |
| 115 | 120 | 125 | |
| Val Gly Leu Lys Lys Arg Val Val Gln Val Trp Phe Gln Asn Thr Arg | | | |
| 130 | 135 | 140 | |
| Ala Arg Glu Arg Lys Gly Gln Phe Arg Ala Val Gly Pro Ala Gln Ser | | | |
| 145 | 150 | 155 | 160 |
| His Lys Arg Cys Pro Phe Cys Arg Ala Leu Phe Lys Ala Lys Ser Ala | | | |
| 165 | 170 | 175 | |
| Leu Glu Ser His Ile Arg Ser Arg His Trp Asn Glu Gly Lys Gln Ala | | | |
| 180 | 185 | 190 | |
| Gly Tyr Ser Leu Pro Pro Ser Pro Leu Ile Ser Thr Glu Asp Gly Gly | | | |
| 195 | 200 | 205 | |
| Glu Ser Pro Gln Lys Tyr Ile Tyr Phe Asp Tyr Pro Ser Leu Pro Leu | | | |
| 210 | 215 | 220 | |
| Thr Lys Ile Asp Leu Ser Ser Glu Asn Glu Leu Ala Ser Thr Val Ser | | | |
| 225 | 230 | 235 | 240 |

Thr Pro Val Ser Lys Thr Ala Glu Leu Ser Pro Lys Asn Leu Leu Ser
 245 250 255
 Pro Ser Ser Phe Lys Ala Glu Cys Ser Glu Asp Val Glu Asn Leu Asn
 260 265 270
 Ala Pro Pro Ala Glu Ala Gly Tyr Asp Gln Asn Lys Thr Asp Phe Asp
 275 280 285
 Glu Thr Ser Ser Ile Asn Thr Ala Ile Ser Asp Ala Thr Thr Gly Asp
 290 295 300
 Glu Gly Asn Thr Glu Met Glu Ser Thr Thr Gly Ser Ser Gly Asp Val
 305 310 315 320
 Lys Pro Ala Leu Ser Pro Lys Glu Pro Lys Thr Leu Asp Thr Leu Pro
 325 330 335
 Lys Pro Ala Thr Thr Pro Thr Thr Glu Val Cys Asp Asp Lys Phe Leu
 340 345 350
 Phe Ser Leu Thr Ser Pro Ser Ile His Phe Asn Asp Lys Asp Gly Asp
 355 360 365
 His Asp Gln Ser Phe Tyr Ile Thr Asp Asp Pro Asp Asp Asn Ala Asp
 370 375 380
 Arg Ser Glu Thr Ser Ser Ile Ala Asp Pro Ser Ser Pro Asn Pro Phe
 385 390 395 400
 Gly Ser Ser Asn Pro Phe Lys Ser Lys Ser Asn Asp Arg Pro Gly His
 405 410 415
 Lys Arg Phe Arg Thr Gln Met Ser Asn Leu Gln Leu Lys Val Leu Lys
 420 425 430
 Ala Cys Phe Ser Asp Tyr Arg Thr Pro Thr Met Gln Glu Cys Glu Met
 435 440 445
 Leu Gly Asn Glu Ile Gly Leu Pro Lys Arg Val Val Gln Val Trp Phe
 450 455 460
 Gln Asn Ala Arg Ala Lys Glu Lys Lys Phe Lys Ile Asn Ile Gly Lys

465 470 475 480
Pro Phe Met Ile Asn Gln Gly Gly Thr Glu Gly Thr Lys Pro Glu Cys
 485 490 495
Thr Leu Cys Gly Val Lys Tyr Ser Ala Arg Leu Ser Ile Arg Asp His
 500 505 510
Ile Phe Ser Lys Gln His Ile Ser Lys Val Arg Glu Thr Val Gly Ser
 515 520 525
Gln Leu Asp Arg Glu Lys Asp Tyr Leu Ala Pro Thr Thr Val Arg Gln
 530 535 540
Leu Met Ala Gln Gln Glu Leu Asp Arg Ile Lys Lys Ala Ser Asp Val
545 550 555 560
Leu Gly Leu Thr Val Gln Gln Pro Gly Met Met Asp Ser Ser Ser Leu
 565 570 575
His Gly Ile Ser Leu Pro Thr Ala Tyr Pro Gly Leu Pro Gly Leu Pro
 580 585 590
Pro Val Leu Leu Pro Gly Met Asn Gly Pro Ser Ser Leu Pro Gly Phe
 595 600 605
Pro Gln Asn Ser Asn Thr Leu Thr Pro Pro Gly Ala Gly Met Leu Gly
 610 615 620
Phe Pro Thr Ser Ala Thr Ser Ser Pro Ala Leu Ser Leu Ser Ser Ala
625 630 635 640
Pro Thr Lys Pro Leu Leu Gln Thr Pro Pro Pro Pro Pro Pro Pro Pro
 645 650 655
Pro Pro Pro Pro Ser Ser Ser Leu Ser Gly Gln Gln Thr Glu Gln Gln
 660 665 670
Asn Lys Glu Ser Glu Lys Lys Gln Thr Lys Pro Asn Lys Val Lys Lys
 675 680 685
Ile Lys Glu Glu Glu Leu Glu Ala Thr Lys Pro Glu Lys His Pro Lys
 690 695 700

Lys Glu Glu Lys Ile Ser Ser Ala Leu Ser Val Leu Gly Lys Val Val
705 710 715 720
Gly Glu Thr His Val Asp Pro Ile Gln Leu Gln Ala Leu Gln Asn Ala
725 730 735
Ile Ala Gly Asp Pro Ala Ser Phe Ile Gly Gly Gln Phe Leu Pro Tyr
740 745 750
Phe Ile Pro Gly Phe Ala Ser Tyr Phe Thr Pro Gln Leu Pro Gly Thr
755 760 765
Val Gln Gly Gly Tyr Phe Pro Pro Val Cys Gly Met Glu Ser Leu Phe
770 775 780
Pro Tyr Gly Pro Thr Met Pro Gln Thr Leu Ala Gly Leu Ser Pro Gly
785 790 795 800
Ala Leu Leu Gln Gln Tyr Gln Gln Tyr Gln Gln Asn Leu Gln Glu Ser
805 810 815
Leu Gln Lys Gln Gln Lys Gln Gln Gln Glu Gln Gln Gln Lys Pro Ala
820 825 830
Gln Ala Lys Thr Ser Lys Val Glu Ser Asp Gln Pro Gln Asn Ser Asn
835 840 845
Asp Ala Ser Glu Thr Lys Glu Asp Lys Ser Thr Ala Thr Glu Ser Thr
850 855 860
Lys Glu Glu Pro Gln Leu Glu Ser Lys Ser Ala Asp Phe Ser Asp Thr
865 870 875 880
Tyr Val Val Pro Phe Val Lys Tyr Glu Phe Ile Cys Arg Lys Cys Gln
885 890 895
Met Met Phe Thr Asp Glu Asp Ala Ala Val Asn His Gln Lys Ser Phe
900 905 910
Cys Tyr Phe Gly Gln Pro Leu Ile Asp Pro Gln Glu Thr Val Leu Arg
915 920 925
Val Pro Val Ser Lys Tyr Gln Cys Leu Ala Cys Asp Val Ala Ile Ser

930 935 940
Gly Asn Glu Ala Leu Ser Gln His Leu Gln Ser Ser Leu His Lys Glu
945 950 955 960
Lys Thr Ile Lys Lys Gln Ala Met Arg Asn Ala Lys Glu His Val Arg Leu
965 970 975
Leu Pro His Ser Val Cys Ser Pro Asn Pro Asn Thr Thr Ser Thr Ser
980 985 990
Gln Ser Ala Ala Ser Ser Asn Asn Thr Tyr Pro His Leu Ser Cys Phe
995 1000 1005
Ser Met Lys Ser Trp Pro Asn Ile Leu Phe Gln Ala Ser Ala Arg Arg
1010 1015 1020
Ala Ala Ser Pro Pro Ser Ser Pro Pro Ser Leu Ser Leu Pro Ser Thr
1025 1030 1035 1040
Val Thr Ser Ser Leu Cys Ser Thr Ser Gly Val Gln Thr Ser Leu Pro
1045 1050 1055
Thr Glu Ser Cys Ser Asp Glu Ser Asp Ser Glu Leu Ser Gln Lys Leu
1060 1065 1070
Glu Asp Leu Asp Asn Ser Leu Glu Val Lys Ala Lys Pro Ala Ser Gly
1075 1080 1085
Leu Asp Gly Asn Phe Asn Ser Ile Arg Met Asp Met Phe Ser Val
1090 1095 1100

<210> 541

<211> 727

<212> PRT

<213> Homo sapiens

<400> 541

Met Gln Gln Lys Thr Lys Leu Phe Pro Gln Ala Leu Lys Tyr Ser Ile
 1 5 10 15
 Pro His Leu Gly Lys Cys Met Gln Lys Gln His Leu Asn His Tyr Asn
 20 25 30
 Phe Ala Asp His Cys Tyr Asn Arg Ile Lys Leu Lys Lys Tyr His Leu
 35 40 45
 Thr Lys Cys Leu Gln Asn Lys Pro Lys Ile Ser Glu Leu Ala Arg Asn
 50 55 60
 Ile Pro Ser Arg Ser Phe Ser Cys Lys Asp Leu Gln Pro Val Lys Gln
 65 70 75 80
 Glu Asn Glu Lys Pro Leu Pro Glu Asn Thr Asp Ala Phe Glu Lys Val
 85 90 95
 Arg Thr Lys Leu Glu Thr Gln Pro Gln Glu Glu Tyr Glu Ile Ile Asn
 100 105 110
 Val Glu Val Lys His Gly Gly Phe Val Tyr Tyr Gln Glu Gly Cys Cys
 115 120 125
 Leu Val Arg Ser Lys Asp Glu Glu Ala Asp Asn Asp Asn Tyr Glu Val
 130 135 140
 Leu Phe Asn Leu Glu Glu Leu Lys Leu Asp Gln Pro Phe Ile Asp Cys
 145 150 155 160
 Ile Arg Val Ala Pro Asp Glu Lys Tyr Val Ala Ala Lys Ile Arg Thr
 165 170 175
 Glu Asp Ser Glu Ala Ser Thr Cys Val Ile Ile Lys Leu Ser Asp Gln
 180 185 190
 Pro Val Met Glu Ala Ser Phe Pro Asn Val Ser Ser Phe Glu Trp Val
 195 200 205
 Lys Asp Glu Glu Asp Glu Asp Val Leu Phe Tyr Thr Phe Gln Arg Asn
 210 215 220
 Leu Arg Cys His Asp Val Tyr Arg Ala Thr Phe Gly Asp Asn Lys Arg

225 230 235 240
Asn Glu Arg Phe Tyr Thr Glu Lys Asp Pro Ser Tyr Phe Val Phe Leu
 245 250 255
Tyr Leu Thr Lys Asp Ser Arg Phe Leu Thr Ile Asn Ile Met Asn Lys
 260 265 270
Thr Thr Ser Glu Val Trp Leu Ile Asp Gly Leu Ser Pro Trp Asp Pro
 275 280 285
Pro Val Leu Ile Gln Lys Arg Ile His Gly Ile Leu Tyr Tyr Val Glu
 290 295 300
His Arg Asp Asp Glu Leu Tyr Ile Leu Thr Asn Val Gly Glu Pro Thr
305 310 315 320
Glu Phe Lys Leu Met Arg Thr Ala Ala Asp Thr Pro Ala Ile Met Asn
 325 330 335
Trp Asp Leu Phe Phe Thr Met Lys Arg Asn Thr Lys Val Ile Asp Leu
 340 345 350
Asp Met Phe Lys Asp His Cys Val Leu Phe Leu Lys His Ser Asn Leu
 355 360 365
Leu Tyr Val Asn Val Ile Gly Leu Ala Asp Asp Ser Val Arg Ser Leu
 370 375 380
Lys Leu Pro Pro Trp Ala Cys Gly Phe Ile Met Asp Thr Asn Ser Asp
385 390 395 400
Pro Lys Asn Cys Pro Phe Gln Leu Cys Ser Pro Ile Arg Pro Pro Lys
 405 410 415
Tyr Tyr Thr Tyr Lys Phe Ala Glu Gly Lys Leu Phe Glu Glu Thr Gly
 420 425 430
His Glu Asp Pro Ile Thr Lys Thr Ser Arg Val Leu Arg Leu Glu Ala
 435 440 445
Lys Ser Lys Asp Gly Lys Leu Val Pro Met Thr Val Phe His Lys Thr
 450 455 460

Asp Ser Glu Asp Leu Gln Lys Lys Pro Leu Leu Val His Val Tyr Gly
465 470 475 480
Ala Tyr Gly Met Asp Leu Lys Met Asn Phe Arg Pro Glu Arg Arg Val
485 490 495
Leu Val Asp Asp Gly Trp Ile Leu Ala Tyr Cys His Val Arg Gly Gly
500 505 510
Gly Glu Leu Gly Leu Gln Trp His Ala Asp Gly Arg Leu Thr Lys Lys
515 520 525
Leu Asn Gly Leu Ala Asp Leu Glu Ala Cys Ile Lys Thr Leu His Gly
530 535 540
Gln Gly Phe Ser Gln Pro Ser Leu Thr Thr Leu Thr Ala Phe Ser Ala
545 550 555 560
Gly Gly Val Leu Ala Gly Ala Leu Cys Asn Ser Asn Pro Glu Leu Val
565 570 575
Arg Ala Val Thr Leu Glu Ala Pro Phe Leu Asp Val Leu Asn Thr Met
580 585 590
Met Asp Thr Thr Leu Pro Leu Thr Leu Glu Glu Leu Glu Glu Trp Gly
595 600 605
Asn Pro Ser Ser Asp Glu Lys His Lys Asn Tyr Ile Lys Arg Tyr Cys
610 615 620
Pro Tyr Gln Asn Ile Lys Pro Gln His Tyr Pro Ser Ile His Ile Thr
625 630 635 640
Ala Tyr Glu Asn Asp Glu Arg Val Pro Leu Lys Gly Ile Val Ser Tyr
645 650 655
Thr Glu Lys Leu Lys Glu Ala Ile Ala Glu His Ala Lys Asp Thr Gly
660 665 670
Glu Gly Tyr Gln Thr Pro Asn Ile Ile Leu Asp Ile Gln Pro Gly Gly
675 680 685
Asn His Val Ile Glu Asp Ser His Lys Lys Ile Thr Ala Gln Ile Lys

690 695 700
Phe Leu Tyr Glu Glu Leu Gly Leu Asp Ser Thr Ser Val Phe Glu Asp
705 710 715 720
Leu Lys Lys Tyr Leu Lys Phe
725

<210> 542

<211> 378

<212> PRT

<213> Homo sapiens

<400> 542

Met Glu Asp Arg Asp Glu Ser Glu Val Ser Asp Glu Gly Gly Ser Pro
1 5 10 15
Ile Ser Ser Glu Gly Gln Glu Pro Arg Ala Asp Pro Glu Pro Pro Gly
20 25 30
Leu Ala Ala Gly Leu Val Gln Gln Asp Leu Val Phe Glu Val Glu Thr
35 40 45
Pro Ala Val Leu Pro Glu Pro Val Pro Gln Glu Asp Gly Val Asp Leu
50 55 60
Leu Gly Leu His Ser Glu Val Gly Ala Gly Pro Ala Val Pro Pro Gln
65 70 75 80
Ala Cys Lys Ala Pro Ser Ser Asn Thr Asp Leu Leu Ser Cys Leu Leu
85 90 95
Gly Pro Pro Glu Ala Ala Ser Gln Gly Pro Pro Glu Asp Leu Leu Ser
100 105 110
Glu Asp Pro Leu Leu Leu Ala Ser Pro Ala Pro Pro Leu Ser Val Gln
115 120 125

Ser Thr Pro Arg Gly Gly Pro Pro Ala Ala Ala Asp Pro Phe Gly Pro
 130 135 140
 Leu Leu Pro Ser Ser Gly Asn Asn Ser Gln Pro Cys Ser Asn Pro Asp
 145 150 155 160
 Leu Phe Gly Glu Phe Leu Asn Ser Asp Ser Val Thr Val Pro Pro Ser
 165 170 175
 Phe Pro Ser Ala His Ser Ala Pro Pro Pro Ser Cys Ser Ala Asp Phe
 180 185 190
 Leu His Leu Gly Asp Leu Pro Gly Glu Pro Ser Lys Met Thr Ala Ser
 195 200 205
 Ser Ser Asn Pro Asp Leu Leu Gly Gly Trp Ala Ala Trp Thr Glu Thr
 210 215 220
 Ala Ala Ser Ala Val Ala Pro Thr Pro Ala Thr Glu Gly Ser Pro Ala
 225 230 235 240
 Gly Phe Pro Pro Gly Gly Phe Ile Pro Lys Thr Ala Thr Thr Pro Lys
 245 250 255
 Gly Ser Ser Ser Trp Gln Thr Ser Arg Pro Pro Ala Gln Gly Ala Ser
 260 265 270
 Trp Pro Pro Gln Ala Lys Pro Pro Pro Lys Ala Cys Thr Gln Pro Arg
 275 280 285
 Pro Asn Tyr Ala Ser Asn Phe Ser Val Ile Gly Ala Arg Glu Glu Arg
 290 295 300
 Gly Val Arg Ala Pro Ser Phe Gly Glu Ser Pro Thr Leu Cys Cys Cys
 305 310 315 320
 Gly Val Cys Arg Asp Leu Pro Glu Leu Ala Lys Gly Arg Thr Tyr Val
 325 330 335
 Val Phe Phe Ile Ser Glu Pro Ser Pro Gly Thr Gly Thr Ala Lys Pro
 340 345 350
 Leu Arg Glu Arg Arg Gly Phe Arg Cys Val Phe Thr Gly Leu Ser Leu

355 360 365
Gly Gln Ala Ser Gly Ser Leu Leu Phe Gln
370 375

<210> 543

<211> 168

<212> PRT

<213> Homo sapiens

<400> 543

Met Glu Glu Ile Arg Phe Pro Arg Thr Leu Gly Pro Glu Ala Lys Ser
1 5 10 15
Leu Leu Ser Gly Leu Leu Lys Lys Asp Pro Lys Gln Arg Leu Gly Gly
20 25 30
Gly Ser Glu Asp Ala Lys Glu Ile Met Gln His Arg Phe Phe Ala Gly
35 40 45
Ile Val Trp Gln His Val Tyr Glu Lys Lys Val Arg Leu Leu Pro Ala
50 55 60
Tyr Ser Arg Ala Arg Met Leu Pro Thr Tyr Pro His Ser Arg Met His
65 70 75 80
Val Ala Arg Ser Pro Asp Phe Pro His Thr Arg Pro His Leu Arg Ser
85 90 95
Leu Leu Gln Ser Trp Tyr Lys Glu Gly Leu Ala Ala Pro Thr Ser Ala
100 105 110
Pro Gly Ala Gln Arg Leu Trp His Cys Arg Val Pro Pro Gly Asn Trp
115 120 125
Pro Gly Pro His Phe Leu Leu Pro Ser Glu Val Cys His Thr Leu Ser
130 135 140

Phe Leu Leu Pro Ser Glu Val Cys His Thr Leu Ser Ala Ser Leu Gly
 145 150 155 160
 Val Pro Phe Pro Asp Ala Val Gln
 165

<210> 544

<211> 219

<212> PRT

<213> Homo sapiens

<400> 544

Met Val Gly Gly Arg Ser Cys Pro Leu Arg Gln Val Trp Val Gly Asn
 1 5 10 15
 Lys Ser Gly Leu Leu Val Gly Ala Glu Ala Gly Gly Ser Ala Ala Asp
 20 25 30
 Gly Val Thr Pro Pro Gln Glu Cys Ile Leu Ser Gly Ile Met Ser Val
 35 40 45
 Asn Gly Lys Lys Val Leu His Met Asp Arg Asn Pro Tyr Tyr Gly Gly
 50 55 60
 Glu Ser Ser Ser Ile Thr Pro Leu Glu Glu Leu Tyr Lys Arg Phe Gln
 65 70 75 80
 Leu Leu Glu Gly Pro Pro Glu Ser Met Gly Arg Gly Arg Asp Trp Asn
 85 90 95
 Val Asp Leu Ile Pro Lys Phe Leu Met Ala Asn Gly Gln Leu Val Lys
 100 105 110
 Met Leu Leu Tyr Thr Glu Val Thr Arg Tyr Leu Asp Phe Lys Val Val
 115 120 125
 Glu Gly Ser Phe Val Tyr Lys Gly Gly Lys Ile Tyr Arg Val Pro Ser

130 135 140
 Thr Glu Thr Glu Ala Leu Ala Ser Asn Leu Met Gly Met Phe Glu Lys
 145 150 155 160
 Arg Arg Phe Arg Lys Phe Leu Val Phe Val Ala Asn Phe Asp Glu Asn
 165 170 175
 Asp Pro Lys Thr Phe Glu Gly Val Asp Pro Gln Thr Thr Ser Met Arg
 180 185 190
 Asp Val Tyr Arg Lys Phe Asp Leu Gly Gln Asp Val Ile Asp Phe Thr
 195 200 205
 Gly His Ala Leu Ala Leu Tyr Arg Thr Asp Glu
 210 215

<210> 545

<211> 419

<212> PRT

<213> Homo sapiens

<400> 545

Met Leu Arg Cys Phe His Ser Lys Gly Val Asn Tyr Ile Asn Phe Ser
 1 5 10 15
 Ala Thr Gly Lys Leu Leu Val Ser Val Gly Val Asp Pro Glu His Thr
 20 25 30
 Ile Thr Val Trp Arg Trp Gln Glu Gly Ala Lys Val Ala Ser Arg Gly
 35 40 45
 Gly His Leu Glu Arg Ile Phe Val Val Glu Phe Arg Pro Asp Ser Asp
 50 55 60
 Thr Gln Phe Val Ser Val Gly Val Lys His Met Lys Phe Trp Thr Leu
 65 70 75 80

| | | | |
|---|-----|-----|-----|
| Ala Gly Ser Ala Leu Leu Tyr Lys Lys Gly Val Ile Gly Ser Leu Gly | | | |
| | 85 | 90 | 95 |
| Ala Ala Lys Met Gln Thr Met Leu Ser Val Ala Phe Gly Ala Asn Asn | | | |
| | 100 | 105 | 110 |
| Leu Thr Phe Thr Gly Ala Ile Asn Gly Asp Val Tyr Val Trp Lys Asp | | | |
| | 115 | 120 | 125 |
| His Phe Leu Ile Arg Leu Val Ala Lys Ala His Thr Gly Pro Val Phe | | | |
| | 130 | 135 | 140 |
| Thr Met Tyr Thr Thr Leu Arg Asp Gly Leu Ile Val Thr Gly Gly Lys | | | |
| | 145 | 150 | 155 |
| Glu Arg Pro Thr Lys Glu Gly Gly Ala Val Lys Leu Trp Asp Gln Glu | | | |
| | 165 | 170 | 175 |
| Met Lys Arg Cys Arg Ala Phe Gln Leu Glu Thr Gly Gln Leu Val Glu | | | |
| | 180 | 185 | 190 |
| Cys Val Arg Ser Val Cys Arg Gly Lys Gly Lys Ile Leu Val Gly Thr | | | |
| | 195 | 200 | 205 |
| Lys Asp Gly Glu Ile Ile Glu Val Gly Glu Lys Asn Ala Ala Ser Asn | | | |
| | 210 | 215 | 220 |
| Ile Leu Ile Asp Gly His Met Glu Gly Glu Ile Trp Gly Leu Ala Thr | | | |
| | 225 | 230 | 235 |
| His Pro Ser Lys Asp Leu Phe Ile Ser Ala Ser Asn Asp Gly Thr Ala | | | |
| | 245 | 250 | 255 |
| Arg Ile Trp Asp Leu Ala Asp Lys Lys Leu Leu Asn Lys Val Ser Leu | | | |
| | 260 | 265 | 270 |
| Gly His Ala Ala Arg Cys Ala Ala Tyr Ser Pro Asp Gly Glu Met Val | | | |
| | 275 | 280 | 285 |
| Ala Ile Gly Met Lys Asn Gly Glu Phe Val Ile Leu Leu Val Asn Ser | | | |
| | 290 | 295 | 300 |
| Leu Lys Val Trp Gly Lys Lys Arg Asp Arg Lys Ser Ala Ile Gln Asp | | | |

| | | | |
|---|-----|-----|-----|
| 305 | 310 | 315 | 320 |
| Ile Arg Ile Ser Pro Asp Asn Arg Phe Leu Ala Val Gly Ser Ser Glu | | | |
| | 325 | 330 | 335 |
| His Thr Val Asp Phe Tyr Asp Leu Thr Gln Gly Thr Asn Leu Asn Arg | | | |
| | 340 | 345 | 350 |
| Ile Gly Tyr Cys Lys Asp Ile Pro Ser Phe Val Ile Gln Met Asp Phe | | | |
| | 355 | 360 | 365 |
| Ser Ala Asp Gly Glu Tyr Ile Gln Met Gln Leu Thr Leu Leu Val Gly | | | |
| | 370 | 375 | 380 |
| Asn His Thr Gln Arg Thr Ala Ile Leu Gly Leu Trp Lys Ile Ala Arg | | | |
| 385 | 390 | 395 | 400 |
| Lys Trp Met Arg Arg Lys Met Gly Lys Trp Pro Ala Val Val Val Met | | | |
| | 405 | 410 | 415 |
| Gly Trp Pro | | | |

<210> 546

<211> 699

<212> PRT

<213> Homo sapiens

<400> 546

| | | | |
|---|----|----|----|
| Met Asn Thr Phe Gln Ala Ser Val Ser Phe Gln Asp Val Thr Val Glu | | | |
| 1 | 5 | 10 | 15 |
| Phe Ser Gln Glu Glu Trp Gln His Met Gly Pro Val Glu Arg Thr Leu | | | |
| | 20 | 25 | 30 |
| Tyr Arg Asp Val Met Leu Glu Asn Tyr Ser His Leu Val Ser Val Gly | | | |
| | 35 | 40 | 45 |

Tyr Cys Phe Thr Lys Pro Glu Leu Ile Phe Thr Leu Glu Gln Gly Glu
 50 55 60
 Asp Pro Trp Leu Leu Glu Lys Glu Lys Gly Phe Leu Ser Arg Asn Ser
 65 70 75 80
 Pro Glu Asp Ser Gln Pro Asp Glu Ile Ser Glu Lys Ser Pro Glu Asn
 85 90 95
 Gln Gly Lys His Leu Leu Gln Val Leu Phe Thr Asn Lys Leu Leu Thr
 100 105 110
 Thr Glu Gln Glu Ile Ser Gly Lys Pro His Asn Arg Asp Ile Asn Ile
 115 120 125
 Phe Arg Ala Arg Met Met Pro Cys Lys Cys Asp Ile Ala Gly Ser Ala
 130 135 140
 Cys Gln Gly Leu Ser Leu Met Ala Pro His Cys Gln Tyr Ser Lys Glu
 145 150 155 160
 Lys Ala His Glu Arg Asn Val Cys Asp Lys Trp Leu Ile Ser Ile Lys
 165 170 175
 Asp Gly Arg Thr Asn Thr Gln Glu Lys Ser Phe Ala Tyr Ser Lys Ile
 180 185 190
 Val Lys Thr Leu His His Lys Glu Glu Val Ile Gln His Gln Thr Ile
 195 200 205
 Gln Thr Leu Gly Gln Asp Phe Glu Tyr Asn Glu Ser Arg Lys Ala Phe
 210 215 220
 Leu Glu Lys Ala Ala Leu Val Thr Ser Asn Ser Thr His Pro Lys Gly
 225 230 235 240
 Lys Ser Tyr Asn Phe Asn Lys Phe Gly Glu Asn Lys Tyr Asp Lys Ser
 245 250 255
 Thr Phe Ile Ile Pro Gln Asn Met Asn Pro Glu Lys Ser His Tyr Glu
 260 265 270
 Phe Asn Asp Thr Gly Asn Cys Phe Cys Arg Ile Thr His Lys Thr Leu

| | | |
|---|-----|-----|
| 275 | 280 | 285 |
| Thr Gly Gly Lys Ser Phe Ser Gln Lys Ser His Ile Arg Glu His His | | |
| 290 | 295 | 300 |
| Arg Val His Ile Gly Val Lys Pro Phe Glu Tyr Gly Lys Ser Phe Asn | | |
| 305 | 310 | 315 |
| Arg Asn Ser Thr Leu Pro Val His Gln Arg Thr His Ala Thr Asp Lys | | |
| 325 | 330 | 335 |
| Tyr Ser Asp Tyr His Pro Cys Thr Glu Thr Phe Ser Tyr Gln Ser Thr | | |
| 340 | 345 | 350 |
| Phe Ser Val His Gln Lys Val His Ile Arg Ala Lys Pro Tyr Glu Tyr | | |
| 355 | 360 | 365 |
| Asn Glu Cys Gly Lys Ser Cys Ser Met Asn Ser His Leu Ile Trp Pro | | |
| 370 | 375 | 380 |
| Gln Lys Ser His Thr Gly Glu Lys Pro Tyr Glu Cys Pro Glu Cys Gly | | |
| 385 | 390 | 395 |
| Lys Ala Phe Ser Glu Lys Ser Arg Leu Arg Lys His Gln Arg Thr His | | |
| 405 | 410 | 415 |
| Thr Gly Glu Lys Pro Tyr Lys Cys Asp Gly Cys Asp Lys Ala Phe Ser | | |
| 420 | 425 | 430 |
| Ala Lys Ser Gly Leu Arg Ile His Gln Arg Thr His Thr Gly Glu Lys | | |
| 435 | 440 | 445 |
| Pro Phe Glu Cys His Glu Cys Gly Lys Ser Phe Asn Tyr Lys Ser Ile | | |
| 450 | 455 | 460 |
| Leu Ile Val His Gln Arg Thr His Thr Gly Glu Lys Pro Phe Glu Cys | | |
| 465 | 470 | 475 |
| Asn Glu Cys Gly Lys Ser Phe Ser His Met Ser Gly Leu Arg Asn His | | |
| 485 | 490 | 495 |
| Arg Arg Thr His Thr Gly Glu Arg Pro Tyr Lys Cys Asp Glu Cys Gly | | |
| 500 | 505 | 510 |

Lys Ala Phe Lys Leu Lys Ser Gly Leu Arg Lys His His Arg Thr His
 515 520 525
 Thr Gly Glu Lys Pro Tyr Lys Cys Asn Gln Cys Gly Lys Ala Phe Gly
 530 535 540
 Gln Lys Ser Gln Leu Arg Gly His His Arg Ile His Thr Gly Glu Lys
 545 550 555 560
 Pro Tyr Lys Cys Asn His Cys Gly Glu Ala Phe Ser Gln Lys Ser Asn
 565 570 575
 Leu Arg Val His His Arg Thr His Thr Gly Glu Lys Pro Tyr Gln Cys
 580 585 590
 Glu Glu Cys Gly Lys Thr Phe Arg Gln Lys Ser Asn Leu Arg Gly His
 595 600 605
 Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly
 610 615 620
 Lys Ala Phe Ser Glu Lys Ser Val Leu Arg Lys His Gln Arg Thr His
 625 630 635 640
 Thr Gly Glu Lys Pro Tyr Asn Cys Asn Gln Cys Gly Glu Ala Phe Ser
 645 650 655
 Gln Lys Ser Asn Leu Arg Val His Gln Arg Thr His Thr Gly Glu Lys
 660 665 670
 Pro Tyr Lys Cys Asp Lys Cys Gly Arg Thr Phe Ser Gln Lys Ser Ser
 675 680 685
 Leu Arg Glu His Gln Lys Ala His Pro Gly Asp
 690 695

<210> 547

<211> 319

<212> PRT

<213> Homo sapiens

<400> 547

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Tyr | Pro | Ala | Pro | Ala | Thr | Val | Gln | Ala | Ala | Asp | Gly | Gly | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Gly | Pro | Tyr | Ser | Ser | Ser | Glu | Leu | Leu | Glu | Gly | Gln | Glu | Pro | Asp |
| | | | | 20 | | | | 25 | | | | | 30 | | |
| Gly | Val | Arg | Phe | Asp | Arg | Glu | Arg | Ala | Arg | Arg | Leu | Trp | Glu | Ala | Val |
| | | | 35 | | | | | 40 | | | | | 45 | | |
| Ser | Gly | Ala | Gln | Pro | Val | Gly | Arg | Glu | Glu | Ala | Gln | Phe | Phe | Pro | His |
| | | 50 | | | | | 55 | | | | | 60 | | | |
| Ser | Arg | Thr | Val | Ile | Pro | Ile | Leu | Val | Leu | Ser | Glu | Thr | Tyr | Ser | Leu |
| | 65 | | | | 70 | | | | 75 | | | | | 80 | |
| Cys | His | Pro | Val | Glu | His | Met | Ile | Gln | Lys | Asn | Gln | Cys | Leu | Phe | Thr |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asn | Thr | Gln | Cys | Lys | Val | Cys | Cys | Ala | Leu | Leu | Ile | Ser | Glu | Ser | Gln |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Lys | Leu | Ala | His | Tyr | Gln | Ser | Lys | Lys | His | Ala | Asn | Lys | Val | Lys | Arg |
| | | 115 | | | | | 120 | | | | | | 125 | | |
| Tyr | Leu | Ala | Ile | His | Gly | Met | Glu | Thr | Leu | Lys | Gly | Glu | Thr | Lys | Lys |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| Leu | Asp | Ser | Asp | Gln | Lys | Ser | Ser | Arg | Ser | Lys | Asp | Lys | Asn | Gln | Cys |
| | 145 | | | | 150 | | | | | 155 | | | | 160 | |
| Cys | Pro | Ile | Cys | Asn | Met | Thr | Phe | Ser | Ser | Pro | Val | Val | Ala | Gln | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| His | Tyr | Leu | Gly | Lys | Thr | His | Ala | Lys | Asn | Leu | Lys | Leu | Lys | Gln | Gln |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Ser | Thr | Lys | Val | Glu | Ala | Leu | His | Gln | Asn | Arg | Glu | Met | Ile | Asp | Pro |
| | | 195 | | | | | | 200 | | | | | 205 | | |

Asp Lys Phe Cys Ser Leu Cys His Ala Thr Phe Asn Asp Pro Val Met

210

215

220

Ala Gln Gln His Tyr Val Gly Lys Lys His Arg Lys Gln Glu Thr Lys

225

230

235

240

Leu Lys Leu Met Ala Arg Tyr Gly Arg Leu Ala Asp Pro Ala Val Thr

245

250

255

Asp Phe Pro Ala Gly Lys Gly Tyr Pro Cys Lys Thr Cys Lys Ile Val

260

265

270

Leu Asn Ser Ile Glu Gln Tyr Gln Ala His Val Ser Gly Phe Lys His

275

280

285

Lys Asn Gln Ser Pro Lys Thr Val Ala Ser Ser Leu Gly Gln Ile Pro

290

295

300

Met Gln Arg Gln Pro Ile Gln Lys Asp Ser Thr Thr Leu Glu Asp

305

310

315

<210> 548

<211> 458

<212> PRT

<213> Homo sapiens

<400> 548

Met Glu Ser Asn Phe Asn Thr Glu Ser Ser Ser Thr Phe Thr Leu Gln

1

5

10

15

Ser Ser Ser Glu Thr Leu Phe Ser Ile Gln Leu Leu Asp Phe Lys Thr

20

25

30

Ser Leu Leu Glu Ala Leu Glu Glu Leu Arg Met Arg Arg Glu Ala Glu

35

40

45

Ile His Tyr Glu Glu Gln Ile Gly Lys Ile Ile Val Glu Thr Gln Glu

50 55 60
Leu Lys Trp Gln Lys Glu Thr Leu Gln Asn Gln Lys Glu Thr Leu Ala
65 70 75 80
Glu Gln His Lys Glu Ala Met Ala Val Phe Lys Lys Gln Leu Gln Met
85 90 95
Lys Met Cys Ala Leu Glu Glu Glu Lys Gly Lys Tyr Gln Leu Ala Thr
100 105 110
Glu Ile Lys Glu Lys Glu Ile Glu Gly Leu Lys Glu Thr Leu Lys Ala
115 120 125
Leu Gln Val Ser Lys Tyr Ser Leu Gln Lys Lys Val Ser Glu Met Glu
130 135 140
Gln Lys Val Gln Leu His Leu Leu Ala Lys Glu Asp Tyr His Lys Gln
145 150 155 160
Leu Ser Glu Ile Glu Lys Tyr Tyr Ala Thr Ile Thr Gly Gln Phe Gly
165 170 175
Leu Val Lys Glu Asn His Glu Lys Leu Glu Gln Asn Val Arg Glu Ala
180 185 190
Ile Gln Ser Asn Lys Arg Leu Ser Ala Leu Asn Lys Lys Gln Glu Ala
195 200 205
Glu Ile Cys Ser Leu Lys Lys Glu Leu Lys Lys Ala Ala Ser Asp Leu
210 215 220
Ile Lys Ser Lys Val Thr Cys Gln Tyr Lys Met Gly Glu Glu Asn Ile
225 230 235 240
Asn Leu Thr Ile Lys Glu Gln Lys Phe Gln Glu Leu Gln Glu Arg Leu
245 250 255
Asn Met Glu Leu Glu Leu Asn Glu Lys Ile Asn Glu Glu Ile Thr His
260 265 270
Ile Gln Glu Glu Lys Gln Asp Ile Ile Ile Ser Phe Gln His Met Gln
275 280 285

Gln Leu Leu Arg Gln Gln Ile Gln Ala Asn Thr Glu Met Glu Ala Glu
290 295 300
Leu Lys Val Leu Lys Glu Asn Asn Gln Thr Leu Glu Arg Asp Asn Glu
305 310 315 320
Leu Gln Arg Glu Lys Val Lys Glu Asn Glu Glu Lys Phe Leu Asn Leu
325 330 335
Gln Asn Glu His Glu Lys Ala Leu Gly Thr Trp Lys Arg His Ala Glu
340 345 350
Glu Leu Asn Gly Glu Ile Asn Lys Ile Lys Asn Glu Leu Ser Ser Leu
355 360 365
Lys Glu Thr His Ile Glu Leu Gln Glu His Tyr Asn Lys Leu Cys Asn
370 375 380
Gln Lys Thr Phe Glu Glu Asp Lys Lys Phe Gln Asn Val Pro Glu Val
385 390 395 400
Asn Asn Glu Asn Ser Glu Met Ser Thr Glu Lys Ser Glu Asn Thr Ile
405 410 415
Ile Gln Lys Tyr Asn Thr Glu Gln Glu Ile Arg Glu Glu Asn Met Glu
420 425 430
Asn Phe Cys Ser Asp Thr Glu Tyr Arg Glu Lys Glu Glu Lys Lys Arg
435 440 445
Arg Leu Ile Tyr Arg Gly Asn Asn Tyr Arg
450 455

<210> 549

<211> 814

<212> PRT

<213> Homo sapiens

<400> 549

Met Val Lys Gln Thr Ile Gln Ile Phe Ala Arg Val Lys Pro Pro Val
 1 5 10 15
 Arg Lys His Gln Gln Gly Ile Tyr Ser Ile Asp Glu Asp Glu Lys Leu
 20 25 30
 Ile Pro Ser Leu Glu Ile Ile Leu Pro Arg Asp Leu Ala Asp Gly Phe
 35 40 45
 Val Asn Asn Lys Arg Glu Ser Tyr Lys Phe Lys Phe Gln Arg Ile Phe
 50 55 60
 Asp Gln Asp Ala Asn Gln Glu Thr Val Phe Glu Asn Ile Ala Lys Pro
 65 70 75 80
 Val Ala Gly Ser Val Leu Ala Gly Tyr Asn Gly Thr Ile Phe Ala Tyr
 85 90 95
 Gly Gln Thr Gly Ser Gly Lys Thr Phe Thr Ile Thr Gly Gly Ala Glu
 100 105 110
 Arg Tyr Ser Asp Arg Gly Ile Ile Pro Arg Thr Leu Ser Tyr Ile Phe
 115 120 125
 Glu Gln Leu Gln Lys Asp Ser Ser Lys Ile Tyr Thr Thr His Ile Ser
 130 135 140
 Tyr Leu Glu Ile Tyr Asn Glu Cys Gly Tyr Asp Leu Leu Asp Pro Arg
 145 150 155 160
 His Glu Ala Ser Ser Leu Glu Asp Leu Pro Lys Val Thr Ile Leu Glu
 165 170 175
 Asp Pro Asp Gln Asn Ile His Leu Lys Asn Leu Thr Leu His Gln Ala
 180 185 190
 Thr Thr Glu Glu Glu Ala Leu Asn Leu Leu Phe Leu Gly Asp Thr Asn
 195 200 205
 Arg Met Ile Ala Glu Thr Pro Met Asn Gln Ala Ser Thr Arg Ser His
 210 215 220

Cys Ile Phe Thr Ile His Leu Ser. Ser Lys Glu Pro Gly Ser Ala Thr
225 230 235 240
Val Arg His Ala Lys Leu His Leu Val Asp Leu Ala Gly Ser Glu Arg
245 250 255
Val Ala Lys Thr Gly Val Gly Gly His Leu Leu Thr Glu Ala Lys Tyr
260 265 270
Ile Asn Leu Ser Leu His Tyr Leu Glu Gln Val Ile Ile Ala Leu Ser
275 280 285
Glu Lys His Arg Ser His Ile Pro Tyr Arg Asn Ser Met Met Thr Ser
290 295 300
Val Leu Arg Asp Ser Leu Gly Gly Asn Cys Met Thr Thr Met Ile Ala
305 310 315 320
Thr Leu Ser Leu Glu Lys Arg Asn Leu Asp Glu Ser Ile Ser Thr Cys
325 330 335
Arg Phe Ala Gln Arg Val Ala Leu Ile Lys Asn Glu Ala Val Leu Asn
340 345 350
Glu Glu Ile Asn Pro Arg Leu Val Ile Lys Arg Leu Gln Lys Glu Ile
355 360 365
Gln Glu Leu Lys Asp Glu Leu Ala Met Val Thr Gly Glu Gln Arg Thr
370 375 380
Glu Ala Leu Thr Glu Ala Glu Leu Leu Gln Leu Glu Lys Leu Ile Thr
385 390 395 400
Ser Phe Leu Glu Asp Gln Asp Ser Asp Ser Arg Leu Glu Val Gly Ala
405 410 415
Asp Met Arg Lys Val His His Cys Phe His His Leu Lys Lys Leu Leu
420 425 430
Asn Asp Lys Lys Ile Leu Glu Asn Asn Thr Val Ser Ser Glu Ser Lys
435 440 445
Asp Gln Asp Cys Gln Glu Pro Leu Lys Glu Glu Glu Tyr Arg Lys Leu

| | | |
|---|-----|-----|
| 450 | 455 | 460 |
| Arg Asp Ile Leu Lys Gln Arg Asp Asn Glu Ile Asn Ile Leu Val Asn | | |
| 465 | 470 | 475 |
| Met Leu Lys Lys Glu Lys Lys Lys Ala Gln Glu Ala Leu His Leu Ala | | |
| 485 | 490 | 495 |
| Gly Met Asp Arg Arg Glu Phe Arg Gln Ser Gln Ser Pro Pro Phe Arg | | |
| 500 | 505 | 510 |
| Leu Gly Asn Pro Glu Glu Gly Gln Arg Met Arg Leu Ser Ser Ala Pro | | |
| 515 | 520 | 525 |
| Ser Gln Ala Gln Asp Phe Ser Ile Leu Gly Lys Arg Ser Ser Leu Leu | | |
| 530 | 535 | 540 |
| His Lys Lys Ile Gly Met Lys Glu Glu Met Ser Leu Gly Cys Gln Glu | | |
| 545 | 550 | 555 |
| Ala Phe Glu Ile Phe Lys Arg Asp His Ala Asp Ser Val Thr Ile Asp | | |
| 565 | 570 | 575 |
| Asp Asn Lys Gln Ile Leu Lys Gln Arg Phe Ser Glu Ala Lys Ala Leu | | |
| 580 | 585 | 590 |
| Gly Glu Ser Ile Asn Glu Ala Arg Ser Lys Ile Gly His Leu Lys Glu | | |
| 595 | 600 | 605 |
| Glu Ile Thr Gln Arg His Ile Gln Gln Val Ala Leu Gly Ile Ser Glu | | |
| 610 | 615 | 620 |
| Asn Met Ala Val Pro Leu Met Pro Asp Gln Gln Glu Glu Lys Leu Arg | | |
| 625 | 630 | 635 |
| Ser Gln Leu Glu Glu Glu Lys Arg Arg Tyr Lys Thr Met Phe Thr Arg | | |
| 645 | 650 | 655 |
| Leu Lys Ala Leu Lys Val Glu Ile Glu His Leu Gln Leu Leu Met Asp | | |
| 660 | 665 | 670 |
| Lys Ala Lys Val Lys Leu Gln Lys Glu Phe Glu Val Trp Trp Ala Glu | | |
| 675 | 680 | 685 |

Glu Ala Thr Asn Leu Gln Val Asn Ser Pro Ala Val Asn Ser Leu Asp
 690 695 700
 His Thr Lys Pro Phe Leu Gln Thr Ser Asp Phe Gln His Glu Arg Ser
 705 710 715 720
 Gln Leu Leu Ser Asn Lys Ser Ser Gly Gly Trp Glu Val Gln Asp Gln
 725 730 735
 Gly Thr Gly Arg Phe Asp Val Cys Asp Val Asn Ala Arg Lys Ile Leu
 740 745 750
 Pro Ser Pro Cys Pro Ser Pro His Ser Gln Lys Gln Ser Ser Thr Ser
 755 760 765
 Thr Pro Leu Gly Asp Ser Ile Pro Lys Arg Pro Val Ser Ser Ile Pro
 770 775 780
 Leu Thr Gly Asp Ser Gln Thr Asp Ser Asp Ile Ile Ala Phe Ile Lys
 785 790 795 800
 Ala Arg Gln Ser Ile Leu Gln Lys Gln Cys Leu Gly Ser Asn
 805 810

<210> 550

<211> 503

<212> PRT

<213> Homo sapiens

<400> 550

Met Gly Ala Leu Thr Phe Arg Asp Val Ala Ile Glu Phe Ser Leu Glu
 1 5 10 15
 Glu Trp Gln Cys Leu Asp Thr Glu Gln Gln Asn Leu Tyr Arg Asn Val
 20 25 30
 Met Leu Asp Asn Tyr Arg Asn Leu Val Phe Leu Gly Ile Ala Val Ser

| | | |
|---|-----|-----|
| 35 | 40 | 45 |
| Lys Pro Asp Leu Ile Thr Cys Leu Glu Gln Glu Lys Glu Pro Trp Asn | | |
| 50 | 55 | 60 |
| Leu Lys Thr His Asp Met Val Ala Lys Pro Pro Val Ile Cys Ser His | | |
| 65 | 70 | 75 |
| Ile Ala Gln Asp Leu Trp Pro Glu Gln Gly Ile Lys Asp Tyr Phe Gln | | |
| 85 | 90 | 95 |
| Glu Val Ile Leu Arg Gln Tyr Lys Lys Cys Arg His Glu Asn Leu Leu | | |
| 100 | 105 | 110 |
| Leu Arg Lys Gly Cys Lys Asn Val Asp Glu Phe Lys Met His Lys Lys | | |
| 115 | 120 | 125 |
| Gly Tyr Asn Arg His Asn Gln Cys Leu Thr Thr Ser His Ser Lys Ile | | |
| 130 | 135 | 140 |
| Phe Gln Cys Asp Lys Tyr Val Lys Val Phe His Lys Phe Ser Asn Ser | | |
| 145 | 150 | 155 |
| Asn Arg His Lys Ile Arg His Thr Ser Lys Lys Pro Phe Lys Cys Lys | | |
| 165 | 170 | 175 |
| Glu Cys Gly Lys Leu Phe Cys Ile Leu Ser His Leu Ala Gln His Lys | | |
| 180 | 185 | 190 |
| Lys Ile His Thr Gly Glu Lys Ser Tyr Lys Cys Glu Glu Tyr Gly Lys | | |
| 195 | 200 | 205 |
| Ala Phe Asn Glu Ser Ser Asn Cys Thr Thr His Lys Arg Ile Thr Glu | | |
| 210 | 215 | 220 |
| Lys Lys Pro Tyr Lys Cys Lys Glu Cys Gly Lys Ala Phe Asn Trp Phe | | |
| 225 | 230 | 235 |
| Ser His Phe Thr Thr His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr | | |
| 245 | 250 | 255 |
| Gln Cys Glu Lys Cys Gly Lys Phe Phe Asn Gln Ser Thr Asn Leu Thr | | |
| 260 | 265 | 270 |

Thr His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu
275 280 285
Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu Thr Glu His Lys Lys
290 295 300
Ile His Thr Lys Glu Gln Pro Tyr Lys Cys Glu Lys Cys Gly Lys Ala
305 310 315 320
Phe Lys Trp Ser Ser Thr Leu Thr Lys His Lys Arg Ile His Asn Gly
325 330 335
Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Asn Arg Ser
340 345 350
Ser Thr Leu Asn Arg His Lys Ile Thr His Thr Gly Gly Lys Pro Tyr
355 360 365
Lys Tyr Lys Glu Cys Gly Lys Ala Phe Asn Gln Ser Ser Thr Leu Thr
370 375 380
Ile His Lys Ile Ile His Thr Val Glu Lys Phe Tyr Lys Cys Glu Glu
385 390 395 400
Cys Gly Lys Ala Phe Ser Arg Ile Ser His Leu Thr Thr His Lys Arg
405 410 415
Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Arg Ala
420 425 430
Phe Asn Gln Ser Ser Thr Leu Thr Thr His Lys Arg Ile His Thr Gly
435 440 445
Glu Lys Pro Tyr Glu Cys Glu Glu Cys Gly Lys Ala Phe Asn Arg Ser
450 455 460
Ser Thr Leu Thr Thr His Lys Ile Ile His Ser Gly Glu Lys Ile Tyr
465 470 475 480
Lys Cys Lys Glu Cys Gly Lys Ala Phe Arg Arg Phe Ser His Leu Thr
485 490 495
Arg His Lys Thr Ile His Thr

500

<210> 551

<211> 388

<212> PRT

<213> Homo sapiens

<400> 551

Met Leu Leu Lys Glu Lys Glu Asp Ser Leu Met Thr Cys Gln Gln Ile

1 5 10 15

Tyr Lys Ala Leu Gln Glu Glu Leu Thr Val Lys Glu Lys Gln Glu Glu

20 25 30

Asp Ile Lys Arg Arg Ile Asn Leu Ala Glu Asn Glu Leu Glu Ile Thr

35 40 45

Lys Thr Leu Leu Asn Gln Thr Arg Glu Glu Val Leu Thr Leu Lys Asn

50 55 60

Glu Arg Glu Leu Met Leu Ile Ser His Gln Lys Ser Ile Glu Gln Leu

65 70 75 80

Gln Glu Thr Leu Arg Gln Lys Leu Leu Ser Asp Asp Asn Trp Lys Glu

85 90 95

Lys Ile Glu Ala Glu Leu Ala Lys Glu Arg Ala Gln His Leu Val Glu

100 105 110

Phe Glu Glu Gln Ala Leu Leu Phe Lys Glu Glu Thr Lys Leu Gln Leu

115 120 125

Asp Ile Glu Lys Glu Lys His Gln Asp Val Ile Gln Lys Tyr Lys Lys

130 135 140

Glu Gln Glu Glu Leu Gln Met Lys Ile Ser Asp Leu Ile Thr Gly Ala

145 150 155 160

Thr Arg Asp Leu Arg Gln Glu Val Thr Thr Leu Lys Glu Lys Leu His
165 170 175
Lys Ser His Thr Arg Tyr Thr Glu Glu Ser Asn Ser Lys Glu Lys Glu
180 185 190
Ile Glu Asn Leu Lys Asn Leu Val Ala Glu Phe Glu Ser Arg Leu Lys
195 200 205
Lys Glu Ile Asp Ser Asn Asp Ser Val Ser Glu Asn Leu Arg Lys Glu
210 215 220
Met Glu Gln Lys Ser Asp Glu Leu Lys Arg Val Met Leu Ala Gln Thr
225 230 235 240
Gln Leu Ile Glu Gln Phe Asn Gln Ser Gln Glu Glu Asn Thr Phe Leu
245 250 255
Gln Glu Thr Val Arg Arg Glu Cys Glu Glu Arg Phe Glu Leu Thr Glu
260 265 270
Ala Leu Ser Gln Ala Arg Glu Gln Leu Leu Glu Leu Ser Lys Leu Arg
275 280 285
Gly Ser Leu Pro Phe Ser Pro Cys Ser Leu Ser Lys Gly Ser Leu Thr
290 295 300
Ser Pro Ala Ala Ala Val Ser Asn His Gly Glu Arg Ser Leu Ala Arg
305 310 315 320
Leu Asn Ser Glu Lys Gly Ile Gln Ile Pro Asn Leu Arg Gly Val Ser
325 330 335
Lys Pro Thr Thr Phe Pro Thr Ser Asp Lys Pro Lys Arg Val Arg Ser
340 345 350
Gly Val Pro Ile Leu Pro Gln Pro His Pro Pro Arg Gly Gly Ala Ser
355 360 365
Ser Ala Asn Glu Thr Arg Gln Arg Leu Ala Ala Ile Leu Arg Arg Arg
370 375 380
Arg Ser Gln Gln

385

<210> 552

<211> 165

<212> PRT

<213> Homo sapiens

<400> 552

Met Asp Gly Pro Ala Thr Pro Val Ser Thr Asp Ser Asn Pro Pro Thr

1

5

10

15

Gln Gln Glu Asp Arg Ser Ala Cys Lys Cys Thr His Leu Glu Lys Arg

20

25

30

Leu Phe Pro Leu Leu Leu Val Ala Gln Leu Leu Leu Ser Pro Pro Gly

35

40

45

Ala Ala Ala Val Lys Cys Gln Leu Asp Pro Ala Lys Trp Gln Asp Pro

50

55

60

Gln His Ser Ser Ile Cys Ser Val Leu His Leu Arg His Trp Lys Gly

65

70

75

80

Cys Glu Pro Asp Ile Gly Ser Gln Ser Thr Cys Phe Pro Glu Pro Glu

85

90

95

Ser Cys Leu Pro Val Ala Ala Asp Thr Asp Ser Asn Val Thr Pro Ala

100

105

110

Thr Gln Gln Gln Arg Cys Cys Thr Leu Ala Cys Asn Leu Gly Thr Gly

115

120

125

Pro Leu His Leu Leu Leu Ser Leu Leu Met Gln Leu Gly Ala Arg Ala

130

135

140

Cys Ala Thr Gly Ser Asp Leu Thr Ser Thr Ser Ser Arg Ala Thr Val

145

150

155

160

Asn Leu His Val Pro

165

<210> 553

<211> 832

<212> PRT

<213> Homo sapiens

<400> 553

Met Ala Gly Leu Arg Tyr Ser Val Lys Val Tyr Val Leu Asn Glu Asp

1

5

10

15

Glu Glu Trp Asn Asn Leu Gly Thr Gly Gln Val Ser Ser Thr Tyr Asp

20

25

30

Glu Gln Phe Gln Gly Met Ser Leu Leu Val Arg Ser Asp Ser Asp Gly

35

40

45

Ser Val Ile Leu Arg Ser Gln Ile Pro Pro Asp Arg Pro Tyr Gly Lys

50

55

60

Tyr Gln Glu Thr Leu Ile Val Trp Tyr Glu Ala Glu Asn Gln Gly Leu

65

70

75

80

Val Leu Lys Phe Gln Asp Pro Ala Gly Cys Gln Asp Ile Trp Lys Glu

85

90

95

Ile Cys Gln Ala Gln Gly Lys Asp Pro Ser Ile Gln Thr Thr Val Asn

100

105

110

Ile Ser Asp Glu Pro Glu Glu Asp Phe Asn Glu Met Ser Val Ile Ser

115

120

125

Asn Met Val Val Leu Pro Asp Cys Glu Leu Asn Thr Leu Asp Gln Ile

130

135

140

Ala Asp Ile Val Thr Ser Val Phe Ser Ser Pro Val Thr Asp Arg Glu

145 150 155 160
Arg Leu Ala Glu Ile Leu Lys Asn Glu Ala Tyr Ile Pro Lys Leu Leu
 165 170 175
Gln Leu Phe His Thr Cys Glu Asn Leu Glu Asn Thr Glu Gly Leu His
 180 185 190
His Leu Tyr Glu Ile Ile Lys Gly Ile Leu Phe Leu Asn Glu Ala Cys
 195 200 205
Leu Phe Glu Ile Met Phe Ser Asp Glu Cys Ile Met Asp Val Val Gly
 210 215 220
Cys Leu Glu Tyr Asp Pro Ala Leu Asp Gln Pro Lys Arg His Arg Asp
225 230 235 240
Phe Leu Thr Asn Asp Ala Lys Phe Lys Glu Val Ile Pro Ile Thr Asn
 245 250 255
Ser Glu Leu Arg Gln Lys Ile His Gln Thr Tyr Arg Leu Gln Tyr Ile
 260 265 270
Tyr Asp Ile Leu Leu Pro Val Pro Ser Ile Phe Glu Asp Asn Phe Leu
 275 280 285
Ser Thr Leu Thr Thr Phe Ile Phe Ser Asn Lys Ala Glu Ile Val Ser
 290 295 300
Met Leu Gln Lys Asp His Lys Phe Leu Tyr Glu Val Phe Ala Gln Leu
305 310 315 320
Lys Asp Glu Thr Thr His Asp Asp Arg Arg Cys Glu Leu Leu Phe Phe
 325 330 335
Phe Lys Glu Leu Cys Ser Phe Ser Gln Ala Leu Gln Pro Gln Ser Lys
 340 345 350
Asp Ala Leu Phe Glu Thr Leu Ile Gln Leu Gly Val Leu Pro Ala Leu
 355 360 365
Lys Ile Val Met Ile Arg Asp Asp Leu Gln Val Arg Ser Ala Ala Ala
 370 375 380

Val Ile Cys Ala Tyr Leu Val Glu Tyr Ser Pro Ser Arg Ile Arg Glu
385 390 395 400
Phe Ile Ile Ser Glu Ala His Val Cys Lys Asp Ile Tyr Leu Phe Ile
405 410 415
Asn Val Ile Ile Lys Gln Met Ile Cys Asp Thr Asp Pro Glu Leu Gly
420 425 430
Gly Ala Val His Leu Met Val Val Leu His Thr Leu Leu Asp Pro Arg
435 440 445
Asn Met Leu Thr Thr Pro Glu Lys Ser Glu Arg Ser Glu Phe Leu His
450 455 460
Phe Phe Tyr Lys His Cys Met His Lys Phe Thr Ala Pro Leu Leu Ala
465 470 475 480
Ala Thr Ser Glu His Asn Cys Glu Glu Asp Asp Ile Ala Gly Tyr Asp
485 490 495
Lys Ser Lys Asn Cys Pro Asn Asp Asn Gln Thr Ala Gln Leu Leu Ala
500 505 510
Leu Ile Leu Glu Leu Leu Thr Phe Cys Ile Gln His His Thr Phe Tyr
515 520 525
Ile Arg Ser Tyr Ile Leu Asn Lys Asp Leu Leu Arg Lys Ala Leu Ile
530 535 540
Leu Met Asn Ser Lys His Thr His Leu Ile Leu Cys Val Leu Arg Phe
545 550 555 560
Met Arg Arg Met Ile Cys Leu Asn Asp Glu Ala Tyr Asn Asn Tyr Ile
565 570 575
Ile Lys Gly Asn Leu Phe Glu Pro Val Val Asn Ala Leu Leu Asp Asn
580 585 590
Gly Thr Arg Tyr Asn Met Leu Asn Ser Ala Ile Leu Glu Leu Phe Glu
595 600 605
Tyr Ile Arg Val Glu Asn Ile Lys Pro Leu Val Ser His Ile Val Glu

610 615 620
Lys Phe Tyr Asn Thr Leu Glu Ser Ile Glu Tyr Val Gln Thr Phe Lys
625 630 635 640
Gly Leu Lys Ile Lys Tyr Glu Lys Glu Arg Asp Arg Gln Ser Gln Ile
645 650 655
Gln Lys Asn Leu His Ser Val Leu Gln Asn Ile Val Val Phe Arg Gly
660 665 670
Thr Ile Glu Glu Ile Gly Leu Glu Glu Glu Ile Cys Phe Met Glu Asp
675 680 685
Ala Gly Glu Ala Val Met Pro Pro Leu Glu Asp Asp Asp Glu Phe Met
690 695 700
Glu Thr Lys Arg Thr Gln Glu Gly Glu Ala Val Met Pro Pro Leu Glu
705 710 715 720
Asp Asp Asp Lys Phe Thr Glu Thr Lys Arg Thr His Gln Glu Gly Glu
725 730 735
Ala Val Met Pro Pro Leu Glu Asp Asp Asp Glu Phe Met Glu Thr Lys
740 745 750
Arg Asn Gln Glu His Glu Gly Lys Val Asp Ser Pro Lys Arg Thr Ser
755 760 765
Ser Gly Asp Phe Lys Phe Ser Ser Ser Tyr Ser Ala Cys Ala Ala Ile
770 775 780
Gly Thr Gly Ser Pro Ser Gly Ser Ser Val Val Arg Leu Val Asp His
785 790 795 800
Pro Asp Asp Glu Glu Glu Lys Glu Glu Asp Glu Glu Glu Lys Glu Glu
805 810 815
Asp Lys Glu Asp Glu Thr Ser Pro Lys Lys Lys Pro His Leu Ser Ser
820 825 830

<210> 554

<211> 250

<212> PRT

<213> Homo sapiens

<400> 554

Met Phe His Gly Thr Val Thr Glu Glu Leu Thr Ser His Glu Glu Trp

1 5 10 15

Ser His Tyr Asn Glu Asn Ile Arg Glu Gly Gln Lys Asp Phe Val Phe

20 25 30

Val Lys Phe Asn Gly Leu His Leu Lys Ser Met Glu Asn Leu Gln Ser

35 40 45

Cys Ile Ser Leu Arg Val Cys Ile Phe Ser Asn Asn Phe Ile Thr Asp

50 55 60

Ile His Pro Leu Gln Ser Cys Ile Lys Leu Ile Lys Leu Asp Leu His

65 70 75 80

Gly Asn Gln Ile Lys Ser Leu Pro Asn Thr Lys Phe Trp Asn Gly Leu

85 90 95

Lys Asn Leu Lys Leu Leu Tyr Leu His Asp Asn Gly Phe Ala Lys Leu

100 105 110

Lys Asn Ile Cys Val Leu Ser Ala Cys Pro Thr Leu Ile Ala Leu Thr

115 120 125

Met Phe Asp Cys Pro Val Ser Leu Lys Lys Gly Tyr Arg His Val Leu

130 135 140

Val Asn Ser Ile Trp Pro Leu Lys Ala Leu Asp His His Val Ile Ser

145 150 155 160

Asp Glu Glu Ile Ile Gln Asn Trp His Leu Pro Glu Arg Phe Lys Ala

165 170 175

Cys Asn His Arg Leu Phe Phe Asn Phe Cys Pro Ala Leu Arg Lys Gly

| | | |
|---|-----|-----|
| 180 | 185 | 190 |
| Thr Thr Tyr Glu Glu Glu Ile Asn Asn Ile Lys His Ile Thr Ser Lys | | |
| 195 | 200 | 205 |
| Ile Asn Ala Ile Leu Ala His Asn Ser Pro Val Leu Ile Val Gln Arg | | |
| 210 | 215 | 220 |
| Trp Ile Arg Gly Phe Leu Val Arg Lys Asn Leu Ser Pro Val Phe Phe | | |
| 225 | 230 | 235 |
| His Lys Lys Lys Thr Ala Gly Lys Asn Tyr | | |
| 245 | 250 | |

<210> 555

<211> 788

<212> PRT

<213> Homo sapiens

<400> 555

| | | |
|---|----|----|
| Met Ala Cys Leu Thr His Arg Asn Glu Thr Asp Ala Arg Met Glu Phe | | |
| 1 | 5 | 10 |
| Tyr Ser Leu Phe His Lys Gly Asn Lys Ala Gly Val Gln Trp His Asp | | |
| 20 | 25 | 30 |
| Leu Gly Ser Leu Gln Pro Leu Pro Pro Arg Phe Lys Arg Phe Ser Cys | | |
| 35 | 40 | 45 |
| Leu Ser Leu Gln Ser Ser Trp Asp Tyr Ser Leu Ser Lys Phe Asp Glu | | |
| 50 | 55 | 60 |
| Arg Cys Cys Phe Leu Tyr Val His Asp Asn Ser Asp Asp Phe Gln Ile | | |
| 65 | 70 | 75 |
| Tyr Phe Ser Thr Glu Glu Gln Cys Ser Arg Phe Phe Ser Leu Val Lys | | |
| 85 | 90 | 95 |

Glu Met Ile Thr Asn Thr Ala Gly Ser Thr Val Glu Leu Glu Gly Glu
 100 105 110
 Thr Asp Gly Asp Thr Leu Glu Tyr Glu Tyr Asp His Asp Ala Asn Gly
 115 120 125
 Glu Arg Val Val Leu Gly Lys Gly Thr Tyr Gly Ile Val Tyr Ala Gly
 130 135 140
 Arg Asp Leu Ser Asn Gln Val Arg Ile Ala Ile Lys Glu Ile Pro Glu
 145 150 155 160
 Arg Asp Ser Arg Tyr Ser Gln Pro Leu His Glu Glu Ile Ala Leu His
 165 170 175
 Lys Tyr Leu Lys His Arg Asn Ile Val Gln Tyr Leu Gly Ser Val Ser
 180 185 190
 Glu Asn Gly Tyr Ile Lys Ile Phe Met Glu Gln Val Pro Gly Gly Ser
 195 200 205
 Leu Ser Ala Leu Leu Arg Ser Lys Trp Gly Pro Met Lys Glu Pro Thr
 210 215 220
 Ile Lys Phe Tyr Thr Lys Gln Ile Leu Glu Gly Leu Lys Tyr Leu His
 225 230 235 240
 Glu Asn Gln Ile Val His Arg Asp Ile Lys Gly Asp Asn Val Leu Val
 245 250 255
 Asn Thr Tyr Ser Gly Val Val Lys Ile Ser Asp Leu Gly Thr Ser Lys
 260 265 270
 Arg Leu Ala Gly Val Asn Pro Cys Thr Glu Thr Phe Thr Gly Thr Leu
 275 280 285
 Gln Tyr Met Ala Pro Glu Ile Ile Asp Gln Gly Pro Arg Gly Tyr Gly
 290 295 300
 Ala Pro Ala Asp Ile Trp Ser Leu Gly Cys Thr Ile Ile Glu Met Ala
 305 310 315 320
 Thr Ser Lys Pro Pro Phe His Glu Leu Gly Glu Pro Gln Ala Ala Met

| | | |
|---|-----|-----|
| 325 | 330 | 335 |
| Phe Lys Val Gly Met Phe Lys Ile His Pro Glu Ile Pro Glu Ala Leu | | |
| 340 | 345 | 350 |
| Ser Ala Glu Ala Arg Ala Phe Ile Leu Ser Cys Phe Glu Pro Asp Pro | | |
| 355 | 360 | 365 |
| His Lys Arg Ala Thr Thr Ala Glu Leu Leu Arg Glu Gly Phe Leu Arg | | |
| 370 | 375 | 380 |
| Gln Val Asn Lys Gly Lys Lys Asn Arg Ile Ala Phe Lys Pro Ser Glu | | |
| 385 | 390 | 395 |
| 400 | | |
| Gly Pro Arg Gly Val Val Leu Ala Leu Pro Thr Gln Gly Glu Pro Met | | |
| 405 | 410 | 415 |
| Ala Thr Ser Ser Ser Glu His Gly Ser Val Ser Pro Asp Ser Asp Ala | | |
| 420 | 425 | 430 |
| Gln Pro Asp Ala Leu Phe Glu Arg Thr Arg Ala Pro Arg His His Leu | | |
| 435 | 440 | 445 |
| Gly His Leu Leu Ser Val Pro Asp Glu Ser Ser Ala Leu Glu Asp Arg | | |
| 450 | 455 | 460 |
| Gly Leu Ala Ser Ser Pro Glu Asp Arg Asp Gln Gly Leu Phe Leu Leu | | |
| 465 | 470 | 475 |
| 480 | | |
| Arg Lys Asp Ser Glu Arg Arg Ala Ile Leu Tyr Lys Ile Leu Trp Glu | | |
| 485 | 490 | 495 |
| Glu Gln Asn Gln Val Ala Ser Asn Leu Gln Glu Cys Val Ala Gln Ser | | |
| 500 | 505 | 510 |
| Ser Glu Glu Leu His Leu Ser Val Gly His Ile Lys Gln Ile Ile Gly | | |
| 515 | 520 | 525 |
| Ile Leu Arg Asp Phe Ile Arg Ser Pro Glu His Arg Val Met Ala Thr | | |
| 530 | 535 | 540 |
| Thr Ile Ser Lys Leu Lys Val Asp Leu Asp Phe Asp Ser Ser Ser Ile | | |
| 545 | 550 | 555 |
| 560 | | |

Ser Gln Ile His Leu Val Leu Phe Gly Phe Gln Asp Ala Val Asn Lys

565

570

575

Ile Leu Arg Asn His Leu Ile Arg Pro His Trp Met Phe Ala Met Asp

580

585

590

Asn Ile Ile Arg Arg Ala Val Gln Ala Ala Val Thr Ile Leu Ile Pro

595

600

605

Glu Leu Arg Ala His Phe Glu Pro Thr Cys Glu Thr Glu Gly Val Asp

610

615

620

Lys Asp Met Asp Glu Ala Glu Glu Gly Tyr Pro Pro Ala Thr Gly Pro

625

630

635

640

Gly Gln Glu Ala Gln Pro His Gln Gln His Leu Ser Leu Gln Leu Gly

645

650

655

Glu Leu Arg Gln Glu Thr Asn Arg Leu Leu Glu His Leu Val Glu Lys

660

665

670

Glu Arg Glu Tyr Gln Asn Leu Leu Arg Gln Thr Leu Glu Gln Lys Thr

675

680

685

Gln Glu Leu Tyr His Leu Gln Leu Lys Leu Lys Ser Asn Cys Ile Thr

690

695

700

Glu Asn Pro Ala Gly Pro Tyr Gly Gln Arg Thr Asp Lys Glu Leu Ile

705

710

715

720

Asp Trp Leu Arg Leu Gln Gly Ala Asp Ala Lys Thr Ile Glu Lys Ile

725

730

735

Val Glu Glu Gly Tyr Thr Leu Ser Asp Ile Leu Asn Glu Ile Thr Lys

740

745

750

Glu Asp Leu Arg Tyr Leu Arg Leu Arg Gly Gly Leu Leu Cys Arg Leu

755

760

765

Trp Ser Ala Val Ser Gln Tyr Arg Arg Ala Gln Glu Ala Ser Glu Thr

770

775

780

Lys Asp Lys Ala

785

<210> 556

<211> 266

<212> PRT

<213> Homo sapiens

<400> 556

Met Leu Ile Asn Val Ile Ser Gly Ser Ser Tyr Met Ile His Ser Thr

1 5 10 15

Gln Leu Ile Glu Asn Ala Glu Leu Arg Phe His Thr Asp Glu Gln Leu

20 25 30

Met Thr Leu Phe Met Gln Leu Gln Thr Ala Val Arg Ser Arg Met His

35 40 45

Pro Phe Tyr Ile Thr His Ile Arg Ala His Thr Pro Leu Pro Gly Pro

50 55 60

Leu Thr Ala Gly Asn Gln Met Ala Asp Arg Leu Val Ala Thr Ala Ile

65 70 75 80

Ser Asn Ala Arg His Phe His Asn Leu Thr Arg Val Asn Ala Ser Gly

85 90 95

Leu Lys Arg Arg Tyr Ser Ser Thr Arg Lys Glu Ala Lys Ala Ile Ile

100 105 110

Gln Arg Cys Pro Thr Cys Gln Met Val His Ser Ser Ser Phe Thr Gly

115 120 125

Gly Val Asn Pro Arg Arg Leu Glu Pro Asn Ser Leu Trp Glu Met Asp

130 135 140

Val Thr His Val Pro Ser Phe Gly Arg Leu Ala Tyr Val His Ala Cys

145 150 155 160

Val Asp Thr Phe Ser Leu Trp Ala Ala Cys Gln Ser Gly Glu Ser Ser
 165 170 175
 Ala Tyr Val Lys Arg His Leu Leu Gln Cys Phe Val Val Ile Gly Ile
 180 185 190
 Leu Ala Ser Ile Lys Thr Asp Asn Ala Pro Gly Tyr Thr Ser Gln Ala
 195 200 205
 Leu Ala Thr Phe Phe Ser Ile Arg Asn Ile Lys His Ile Thr Gly Ile
 210 215 220
 Pro Tyr Asn Ser Gln Gly Gln Ala Ile Val Glu Arg Met Asn Leu Ser
 225 230 235 240
 Leu Lys Gln Gln Leu Gln Lys Gln Lys Gly Glu Asn Arg Asp Tyr Gly
 245 250 255
 Thr Pro His Met Gln Leu Asn Arg Ile Ile
 260 265

<210> 557

<211> 279

<212> PRT

<213> Homo sapiens

<400> 557

Met Gly Thr Ser Cys Leu Pro Asp Thr Phe Thr Lys Leu Ile Asn Pro
 1 5 10 15
 Gln Glu Asn Thr Cys Ser Leu Glu Glu Phe Val Leu Gln Leu Glu Leu
 20 25 30
 Ser Gly Tyr Ser Pro Glu Asp Leu Thr Ala Ala Leu Glu Ile Leu Glu
 35 40 45
 Ala Ile Ile Ala Thr Gly Cys Phe Gly Ile Asp Lys Glu Glu Leu Arg

| | | |
|---|-----|-----|
| 50 | 55 | 60 |
| Arg Arg Phe Ser Ala Leu Glu Lys Ala Gly Gly Gly Arg Thr Arg Thr | | |
| 65 | 70 | 75 |
| Phe Ala Asp Cys Ile Gln Ala Leu Leu Glu Gln His Gln Val Leu Glu | | |
| 85 | 90 | 95 |
| Val Gly Gly Asn Thr Ala Arg Leu Val Ala Met Gly Ser Ala Trp Pro | | |
| 100 | 105 | 110 |
| Trp Leu Leu His Ser Val Arg Leu Lys Asp Arg Glu Asp Ala Asp Ile | | |
| 115 | 120 | 125 |
| Gln Arg Glu Asp Pro Gln Ala Arg Pro Leu Glu Gly Ser Ser Ser Glu | | |
| 130 | 135 | 140 |
| Asp Ser Pro Pro Glu Gly Gln Ala Pro Pro Ser His Ser Pro Arg Gly | | |
| 145 | 150 | 155 |
| Thr Lys Arg Arg Ala Ser Trp Ala Ser Glu Asn Gly Glu Thr Asp Ala | | |
| 165 | 170 | 175 |
| Glu Gly Thr Gln Met Thr Pro Ala Lys Arg Pro Ala Leu Gln Asp Ser | | |
| 180 | 185 | 190 |
| Asn Leu Ala Pro Ser Leu Gly Pro Gly Ala Glu Asp Gly Ala Glu Ala | | |
| 195 | 200 | 205 |
| Gln Ala Pro Ser Pro Pro Pro Ala Leu Glu Asp Thr Ala Ala Ala Gly | | |
| 210 | 215 | 220 |
| Ala Ala Gln Glu Asp Gln Glu Gly Val Gly Glu Phe Ser Ser Pro Gly | | |
| 225 | 230 | 235 |
| Gln Glu Gln Leu Ser Gly Gln Ala Gln Pro Pro Glu Gly Ser Glu Asp | | |
| 245 | 250 | 255 |
| Pro Arg Gly Thr Ala Arg Leu Val Pro His Pro Thr Ser Pro His Pro | | |
| 260 | 265 | 270 |
| Gly Phe Pro Ser Pro Pro Pro | | |
| 275 | | |

<210> 558

<211> 325

<212> PRT

<213> Homo sapiens

<400> 558

Met Pro Ser Arg Ile Leu Asp Lys Glu Leu Leu Ser Gly Ile Pro Asp

1 5 10 15

Thr Glu Arg Leu Ser Glu Val Val Asp Asn Arg Ala Pro Gln Arg Asp

20 25 30

Pro Thr His Arg Ala Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln

35 40 45

Arg Asp Pro Thr His Arg Ala Pro Gln Arg Asp Pro Thr His Arg Ala

50 55 60

Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Asp Pro Thr His

65 70 75 80

Arg Pro Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Asp Pro

85 90 95

Thr His Arg Ala Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg

100 105 110

Gly Pro Arg His Arg Ala Pro Gln Arg Ser Pro Arg His Arg Ala Pro

115 120 125

Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Gly Pro Arg His Arg

130 135 140

Ala Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Gly Pro Arg

145 150 155 160

His Arg Ala Pro Gln Arg Gly Pro Thr His Arg Ala Pro Gln Arg Gly

| | | |
|---|-----------------------------|-----|
| 165 | 170 | 175 |
| Pro Arg His Arg Ala Pro Gln Arg Gly | Pro Arg His Arg Ala Pro Gln | |
| 180 | 185 | 190 |
| Arg Gly Pro Thr His Arg Ala Pro Gln Arg Asp | Pro Gly Trp Arg Ala | |
| 195 | 200 | 205 |
| Pro Gln Arg Gly Pro Thr His Arg Ala Pro Gln Arg | Ile Leu Asp Ala | |
| 210 | 215 | 220 |
| Glu Pro Val Ser Gly Phe Leu Asp Ala Glu Ser Leu Ser Gly | Ile Leu | |
| 225 | 230 | 235 |
| 240 | | |
| Val Val Glu Arg Leu Ser Gly Ile Leu Asp Ala Glu Arg Leu Ser Gly | | |
| 245 | 250 | 255 |
| Ile Leu Asp Thr Glu Arg Leu Ser Leu Val Leu His Thr Glu Arg Leu | | |
| 260 | 265 | 270 |
| Ser Gly Ile Leu Val Gly Glu Arg Leu Ser Gly Val Leu His Thr Glu | | |
| 275 | 280 | 285 |
| Arg Leu Ser Gly Ile Leu Val Gly Glu Arg Leu Ser Gly Ile Leu Asp | | |
| 290 | 295 | 300 |
| Thr Glu Arg Leu Ser Gly Ile Leu Asp Thr Glu Pro Leu Ser Glu Ser | | |
| 305 | 310 | 315 |
| 320 | | |
| Gln Ile His Ser Ala | | |
| 325 | | |

<210> 559

<211> 378

<212> PRT

<213> Homo sapiens

<400> 559

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Met | Leu | Ser | Arg | Lys | Leu | Pro | Val | His | Val | Asp | Asp | Pro | Leu | Ser |
| 1 | | | | | 5 | | | | 10 | | | | | 15 | |
| Thr | Thr | Leu | Phe | Ser | Ser | Gln | Leu | Asn | Arg | Arg | Ile | Ser | Asn | Met | Asp |
| | | | | 20 | | | | 25 | | | | | 30 | | |
| Asp | Lys | Val | Tyr | Lys | Met | Ser | Arg | Ala | Leu | Ala | Glu | Ile | Lys | Lys | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Phe | Gln | Lys | Thr | Val | Thr | Gln | Phe | Ile | Asn | Ser | Ile | Leu | Leu | Ala | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Leu | Phe | Thr | Ile | Glu | Tyr | Pro | Thr | Lys | Lys | Glu | Glu | Glu | Glu | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Val | Arg | Phe | Lys | Met | Arg | Ser | Arg | Thr | His | Pro | Glu | Arg | Leu | Pro | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Ser | Leu | Tyr | Ser | Gly | Glu | Ser | Leu | Leu | Arg | Ser | Gln | Ser | Gly | His |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Glu | Ser | Ser | Ile | Ala | Glu | Thr | Leu | Lys | Asp | Glu | Pro | Glu | Ser | Ala |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Val | Ser | Pro | Val | Arg | Lys | Thr | Thr | Lys | Ile | His | Thr | Lys | Ala | Lys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Thr | Ser | Arg | Gly | Lys | Ala | Arg | Glu | Gly | Arg | Ser | Pro | Thr | Arg | Trp |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Ala | Leu | Pro | Ser | Asp | Cys | Pro | Leu | Val | Leu | Arg | Lys | Leu | Met | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Lys | Glu | Asp | Thr | Arg | Ala | Gly | Cys | Lys | Cys | Leu | Val | Lys | Ala | Pro | Leu |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Val | Ser | Asp | Val | Glu | Leu | Glu | Arg | Phe | Leu | Leu | Ala | Pro | Arg | Asp | Pro |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ser | Gln | Val | Leu | Val | Phe | Gly | Ile | Ile | Ser | Ser | Gln | Asn | Tyr | Thr | Ser |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Thr | Gly | Gln | Leu | Gln | Trp | Leu | Leu | Asn | Thr | Leu | Tyr | Asn | His | Gln | Gln |

| | | | |
|---|-----|-----|-----|
| 225 | 230 | 235 | 240 |
| Arg Gly Arg Gly Ser Pro Cys Ile Gln Cys Arg Tyr Asp Ser Tyr Arg | | | |
| | 245 | 250 | 255 |
| Leu Leu Gln Tyr Asp Leu Asp Ser Pro Leu Gln Glu Asp Pro Pro Leu | | | |
| | 260 | 265 | 270 |
| Met Val Lys Lys Asn Ser Val Val Gln Gly Met Ile Leu Met Phe Ala | | | |
| | 275 | 280 | 285 |
| Gly Gly Lys Leu Ile Phe Gly Gly Arg Val Leu Asn Gly Tyr Gly Leu | | | |
| | 290 | 295 | 300 |
| Ser Lys Gln Asn Leu Leu Lys Gln Ile Phe Arg Ser Gln Gln Asp Tyr | | | |
| 305 | 310 | 315 | 320 |
| Lys Met Gly Tyr Phe Leu Pro Asp Asp Tyr Lys Phe Ser Val Pro Asn | | | |
| | 325 | 330 | 335 |
| Ser Val Leu Ser Leu Glu Asp Ser Glu Ser Val Lys Lys Ala Glu Ser | | | |
| | 340 | 345 | 350 |
| Glu Asp Ile Gln Gly Ser Ser Ser Ser Leu Ala Leu Glu Asp Tyr Val | | | |
| | 355 | 360 | 365 |
| Glu Lys Glu Leu Ser Leu Glu Ala Glu Lys | | | |
| | 370 | 375 | |

<210> 560

<211> 455

<212> PRT

<213> Homo sapiens

<400> 560

Met Gly Val Ile Ile Ser Gly Ser Leu Pro Pro Phe Ser Ser Pro Leu

1

5

10

15

Gln Val Gly Pro Val Ser Leu Leu Ala Ile Gly Val Leu Thr Val His
 20 25 30
 Cys Met Val Ile Leu Leu Asn Cys Ala Gln His Leu Ser Gln Arg Leu
 35 40 45
 Gln Lys Thr Phe Val Asn Tyr Gly Glu Ala Thr Met Tyr Gly Leu Glu
 50 55 60
 Thr Cys Pro Asn Thr Trp Leu Arg Ala His Ala Val Trp Gly Arg Trp
 65 70 75 80
 Asn Leu Ala Leu Ser Pro Arg Leu Glu Cys Ser Gly Lys Ile Ser Ala
 85 90 95
 His Cys Asn Pro His Leu Gln Gly Ser Ser Asn Ser Pro Ala Gln Ala
 100 105 110
 Ser Arg Val Ala Gly Ile Tyr Arg Tyr Thr Val Ser Phe Leu Leu Val
 115 120 125
 Ile Thr Gln Leu Gly Phe Cys Ser Val Tyr Phe Met Phe Met Ala Asp
 130 135 140
 Asn Leu Gln Gln Met Val Glu Lys Ala His Val Thr Ser Asn Ile Cys
 145 150 155 160
 Gln Pro Arg Glu Ile Leu Thr Leu Thr Pro Ile Leu Asp Ile Arg Phe
 165 170 175
 Tyr Met Leu Ile Ile Leu Pro Phe Leu Ile Leu Leu Val Phe Ile Gln
 180 185 190
 Asn Leu Lys Val Leu Ser Val Phe Ser Thr Leu Ala Asn Ile Thr Thr
 195 200 205
 Leu Gly Ser Met Ala Leu Ile Phe Glu Tyr Ile Met Glu Gly Ile Pro
 210 215 220
 Tyr Pro Ser Asn Leu Pro Leu Met Ala Asn Trp Lys Thr Phe Leu Leu
 225 230 235 240
 Phe Phe Gly Thr Ala Ile Phe Thr Phe Glu Gly Val Gly Met Val Leu

| | | |
|---|---------------------------------|-----|
| 245 | 250 | 255 |
| Pro Leu Lys Asn Gln Met Lys His | Pro Gln Gln Phe Ser Phe Val Leu | |
| 260 | 265 | 270 |
| Tyr Leu Gly Met Ser Ile Val Ile Ile Leu Tyr Ile Leu Leu Gly Thr | | |
| 275 | 280 | 285 |
| Leu Gly Tyr Met Lys Phe Gly Ser Asp Thr Gln Ala Ser Ile Thr Leu | | |
| 290 | 295 | 300 |
| Asn Leu Pro Asn Cys Trp Leu Tyr Gln Ser Val Lys Leu Met Tyr Ser | | |
| 305 | 310 | 315 |
| Ile Gly Ile Phe Phe Thr Tyr Ala Leu Gln Phe His Val Pro Ala Glu | | |
| 325 | 330 | 335 |
| Ile Ile Ile Pro Phe Ala Ile Ser Gln Val Ser Glu Ser Trp Ala Leu | | |
| 340 | 345 | 350 |
| Phe Val Asp Leu Ser Val Arg Ser Ala Leu Val Cys Leu Thr Cys Val | | |
| 355 | 360 | 365 |
| Ser Ala Ile Leu Ile Pro Arg Leu Asp Leu Val Ile Ser Leu Val Gly | | |
| 370 | 375 | 380 |
| Ser Val Ser Ser Ser Ala Leu Ala Leu Ile Ile Pro Ala Leu Leu Glu | | |
| 385 | 390 | 395 |
| Ile Val Ile Phe Tyr Ser Glu Asp Met Ser Cys Val Thr Ile Ala Lys | | |
| 405 | 410 | 415 |
| Asp Ile Met Ile Ser Ile Val Gly Leu Leu Gly Cys Ile Phe Gly Thr | | |
| 420 | 425 | 430 |
| Tyr Gln Ala Leu Tyr Glu Leu Pro Gln Pro Ile Ser His Ser Met Ala | | |
| 435 | 440 | 445 |
| Asn Ser Thr Gly Val His Ala | | |
| 450 | 455 | |

<210> 561

<211> 162

<212> PRT

<213> Homo sapiens

<400> 561

Met Ser Ile Thr Arg Leu His Glu Gln Lys Leu Val Gln His Val Val

1 5 10 15

Ser Gln Asn Cys Asp Gly Leu His Leu Arg Ser Gly Leu Pro Arg Thr

20 25 30

Ala Ile Ser Glu Leu His Gly Asn Met Tyr Ile Glu Val Ser Ser Pro

35 40 45

Ala Gly Thr Gln Gly Leu His Gly Gln Ala Gly Pro Thr His Cys Ala

50 55 60

Leu Leu Pro Leu Gly Leu Tyr Leu Leu Arg Ser Gln Gln Gly Val Arg

65 70 75 80

Ala Gly Val Arg Cys Asp Gly Ala His Cys Pro Pro Gln Thr Pro Asp

85 90 95

Arg Pro Asp Leu Pro Gln Val Trp Asp Pro Ala Ala Gly His His Cys

100 105 110

Ala Leu Trp Gly Glu Gly Asp Val Gly Ala Ala Ser Glu Leu Gly Ser

115 120 125

Gly Asp Arg Gly Cys Gln Gln Ser Arg His His Pro Val Ser Arg Val

130 135 140

Gln Pro Glu Gly Ser Lys Glu Val Pro Thr Pro Leu Val His Asp Gln

145 150 155 160

Ala Pro

<210> 562

<211> 567

<212> PRT

<213> Homo sapiens

<400> 562

Met Asp Asp Lys Asp Ile Asp Lys Glu Leu Arg Gln Lys Leu Asn Phe

1 5 10 15

Ser Tyr Cys Glu Glu Thr Glu Ile Glu Gly Gln Lys Lys Val Glu Glu

20 25 30

Ser Arg Glu Ala Ser Ser Gln Thr Pro Glu Lys Gly Glu Val Gln Asp

35 40 45

Ser Glu Ala Lys Gly Thr Pro Pro Trp Thr Pro Leu Ser Asn Val His

50 55 60

Glu Leu Asp Thr Ser Ser Glu Lys Asp Lys Glu Ser Pro Asp Gln Ile

65 70 75 80

Leu Arg Thr Pro Val Ser His Pro Leu Lys Cys Pro Glu Thr Pro Ala

85 90 95

Gln Pro Asp Ser Arg Ser Lys Leu Leu Pro Ser Asp Ser Pro Ser Thr

100 105 110

Pro Lys Thr Met Leu Ser Arg Leu Val Ile Ser Pro Thr Gly Lys Leu

115 120 125

Pro Ser Arg Gly Pro Lys His Leu Lys Leu Thr Pro Ala Pro Leu Lys

130 135 140

Asp Glu Met Thr Ser Leu Ala Leu Val Asn Ile Asn Pro Phe Thr Pro

145 150 155 160

Glu Ser Tyr Lys Lys Leu Phe Leu Gln Ser Gly Gly Lys Arg Lys Ile

165 170 175

Arg Gly Asp Leu Glu Glu Ala Gly Pro Glu Glu Gly Lys Gly Gly Leu
180 185 190
Pro Ala Lys Arg Cys Val Leu Arg Glu Thr Asn Met Ala Ser Arg Tyr
195 200 205
Glu Lys Glu Phe Leu Glu Val Glu Lys Ile Gly Val Gly Glu Phe Gly
210 215 220
Thr Val Tyr Lys Cys Ile Lys Arg Leu Asp Gly Cys Val Tyr Ala Ile
225 230 235 240
Lys Arg Ser Met Lys Thr Phe Thr Glu Leu Ser Asn Glu Asn Ser Ala
245 250 255
Leu His Glu Val Tyr Ala His Ala Val Leu Gly His His Pro His Val
260 265 270
Val Arg Tyr Tyr Ser Ser Trp Ala Glu Asp Asp His Met Ile Ile Gln
275 280 285
Asn Glu Tyr Cys Asn Gly Gly Ser Leu Gln Ala Ala Ile Ser Glu Asn
290 295 300
Thr Lys Ser Gly Asn His Phe Glu Glu Pro Lys Leu Lys Asp Ile Leu
305 310 315 320
Leu Gln Ile Ser Leu Gly Leu Asn Tyr Ile His Asn Ser Ser Met Val
325 330 335
His Leu Asp Ile Lys Pro Ser Asn Ile Phe Ile Cys His Lys Val Gln
340 345 350
Ser Glu Ser Ser Gly Val Ile Glu Glu Val Glu Asn Glu Ala Asp Trp
355 360 365
Phe Leu Ser Ala Asn Val Met Tyr Lys Ile Gly Asp Leu Gly His Ala
370 375 380
Thr Ser Ile Asn Lys Pro Lys Val Glu Glu Gly Asp Ser Arg Phe Leu
385 390 395 400
Ala Asn Glu Ile Leu Gln Glu Asp Tyr Arg His Leu Pro Lys Ala Asp

405 410 415
Ile Phe Ala Leu Gly Leu Thr Ile Ala Val Ala Ala Gly Ala Glu Ser
420 425 430
Leu Pro Thr Asn Gly Ala Ala Trp His His Ile Arg Lys Gly Asn Phe
435 440 445
Pro Asp Val Pro Gln Glu Leu Ser Glu Ser Phe Ser Ser Leu Leu Lys
450 455 460
Asn Met Ile Gln Pro Asp Ala Glu Gln Arg Pro Ser Ala Ala Ala Leu
465 470 475 480
Ala Arg Asn Thr Val Leu Arg Pro Ser Leu Gly Lys Thr Glu Glu Leu
485 490 495
Gln Gln Gln Leu Asn Leu Glu Lys Phe Lys Thr Ala Thr Leu Glu Arg
500 505 510
Glu Leu Arg Glu Ala Gln Gln Ala Gln Ser Pro Gln Gly Tyr Thr His
515 520 525
Tyr Gly Asp Thr Gly Val Ser Gly Thr His Thr Gly Ser Arg Ser Thr
530 535 540
Lys Arg Leu Val Gly Gly Lys Ser Ala Arg Ser Ser Ser Phe Thr Ser
545 550 555 560
Gly Glu Arg Glu Pro Leu His
565

<210> 563

<211> 140

<212> PRT

<213> Homo sapiens

<400> 563

Met Asp Phe Ile Val Ala Ala Ser Asn Leu Arg Ala Glu Asn Tyr Asp
 1 5 10 15
 Ile Pro Ser Ala Asp Arg His Lys Ser Lys Leu Ile Ala Gly Lys Ile
 20 25 30
 Ile Pro Ala Ile Ala Thr Thr Thr Ala Ala Val Val Gly Leu Val Cys
 35 40 45
 Leu Glu Leu Tyr Lys Val Val Gln Gly His Arg Gln Leu Asp Ser Tyr
 50 55 60
 Lys Asn Gly Phe Leu Asn Leu Ala Leu Pro Phe Phe Gly Phe Ser Glu
 65 70 75 80
 Pro Leu Ala Ala Pro Arg His Gln Tyr Tyr Asn Gln Glu Trp Thr Leu
 85 90 95
 Trp Asp Arg Phe Glu Val Gln Gly Leu Gln Pro Asn Gly Glu Glu Met
 100 105 110
 Thr Leu Lys Gln Phe Leu Asp Tyr Phe Lys Val Arg Pro Leu Pro Tyr
 115 120 125
 Ser Val Thr Pro Pro Gln Gly Ala Arg Cys Thr Arg
 130 135 140

<210> 564

<211> 477

<212> PRT

<213> Homo sapiens

<400> 564

Met Ser Ala Ala Pro Gly Leu Leu His Gln Glu Leu Ser Cys Pro Leu
 1 5 10 15
 Cys Leu Gln Leu Phe Asp Ala Pro Val Thr Ala Glu Cys Gly His Ser

| | | |
|---|-----|-----|
| 20 | 25 | 30 |
| Phe Cys Arg Ala Cys Leu Gly Arg Val Ala Gly Glu Pro Ala Ala Asp | | |
| 35 | 40 | 45 |
| Gly Thr Val Leu Cys Pro Cys Cys Gln Ala Pro Thr Arg Pro Gln Ala | | |
| 50 | 55 | 60 |
| Leu Ser Thr Asn Leu Gln Leu Ala Arg Leu Val Glu Gly Leu Ala Gln | | |
| 65 | 70 | 75 |
| Val Pro Gln Gly His Cys Glu Glu His Leu Asp Pro Leu Ser Ile Tyr | | |
| 85 | 90 | 95 |
| Cys Glu Gln Asp Arg Ala Leu Val Cys Gly Val Cys Ala Ser Leu Gly | | |
| 100 | 105 | 110 |
| Ser His Arg Gly His Arg Leu Leu Pro Ala Ala Glu Ala His Ala Arg | | |
| 115 | 120 | 125 |
| Leu Lys Thr Gln Leu Pro Gln Gln Lys Leu Gln Leu Gln Glu Ala Cys | | |
| 130 | 135 | 140 |
| Met Arg Lys Glu Lys Ser Val Ala Val Leu Glu His Gln Leu Val Glu | | |
| 145 | 150 | 155 |
| Val Glu Glu Thr Val Arg Gln Phe Arg Gly Ala Val Gly Glu Gln Leu | | |
| 165 | 170 | 175 |
| Gly Lys Met Arg Val Phe Leu Ala Ala Leu Glu Gly Ser Leu Asp Cys | | |
| 180 | 185 | 190 |
| Glu Ala Glu Arg Val Arg Gly Glu Ala Gly Val Ala Leu Arg Arg Glu | | |
| 195 | 200 | 205 |
| Leu Gly Ser Leu Asn Ser Tyr Leu Glu Gln Leu Arg Gln Met Glu Lys | | |
| 210 | 215 | 220 |
| Val Leu Glu Glu Val Ala Asp Lys Pro Gln Thr Glu Phe Leu Met Lys | | |
| 225 | 230 | 235 |
| Tyr Cys Leu Val Thr Ser Arg Leu Gln Lys Ile Leu Ala Glu Ser Pro | | |
| 245 | 250 | 255 |

Pro Pro Ala Arg Leu Asp Ile Gln Leu Pro Ile Ile Ser Asp Asp Phe
 260 265 270
 Lys Phe Gln Val Trp Arg Lys Met Phe Arg Ala Leu Met Pro Ala Leu
 275 280 285
 Glu Glu Leu Thr Phe Asp Pro Ser Ser Ala His Pro Ser Leu Val Val
 290 295 300
 Ser Ser Ser Gly Arg Arg Val Glu Cys Ser Glu Gln Lys Ala Pro Pro
 305 310 315 320
 Ala Gly Glu Asp Pro Arg Gln Phe Asp Lys Ala Val Ala Val Val Ala
 325 330 335
 His Gln Gln Leu Ser Glu Gly Glu His Tyr Trp Glu Val Asp Val Gly
 340 345 350
 Asp Lys Pro Arg Trp Ala Leu Gly Val Ile Ala Ala Glu Ala Pro Arg
 355 360 365
 Arg Gly Arg Leu His Ala Val Pro Ser Gln Gly Leu Trp Leu Leu Gly
 370 375 380
 Leu Arg Glu Gly Lys Ile Leu Glu Ala His Val Glu Ala Lys Glu Pro
 385 390 395 400
 Arg Ala Leu Arg Ser Pro Glu Arg Arg Pro Thr Arg Ile Gly Leu Tyr
 405 410 415
 Leu Ser Phe Gly Asp Gly Val Leu Ser Phe Tyr Asp Ala Ser Asp Ala
 420 425 430
 Asp Ala Leu Val Pro Leu Phe Ala Phe His Glu Arg Leu Pro Arg Pro
 435 440 445
 Val Tyr Pro Phe Phe Asp Val Cys Trp His Asp Lys Gly Lys Asn Ala
 450 455 460
 Gln Pro Leu Leu Leu Val Gly Pro Glu Gly Ala Glu Ala
 465 470 475

<210> 565

<211> 505

<212> PRT

<213> Homo sapiens

<400> 565

Met Ala Val Ala Leu Asp Ser Gln Ile Asp Ala Pro Leu Glu Val Glu

1 5 10 15

Gly Cys Leu Ile Met Lys Val Glu Lys Asp Pro Glu Trp Ala Ser Glu

20 25 30

Pro Ile Leu Glu Gly Ser Asp Ser Ser Glu Thr Phe Arg Lys Cys Phe

35 40 45

Arg Gln Phe Cys Tyr Glu Asp Val Thr Gly Pro His Glu Ala Phe Ser

50 55 60

Lys Leu Trp Glu Leu Cys Cys Arg Trp Leu Lys Pro Glu Met Arg Ser

65 70 75 80

Lys Glu Gln Ile Leu Glu Leu Leu Val Ile Glu Gln Phe Leu Thr Ile

85 90 95

Leu Pro Glu Lys Ile Gln Ala Trp Ala Gln Lys Gln Cys Pro Gln Ser

100 105 110

Gly Glu Glu Ala Val Ala Leu Val Val His Leu Glu Lys Glu Thr Gly

115 120 125

Arg Leu Arg Gln Gln Val Ser Ser Pro Val His Arg Glu Lys His Ser

130 135 140

Pro Leu Gly Ala Ala Trp Glu Val Ala Asp Phe Gln Pro Glu Gln Val

145 150 155 160

Glu Thr Gln Pro Arg Ala Val Ser Arg Glu Glu Pro Gly Ser Leu His

165 170 175

Ser Gly His Gln Glu Gln Leu Asn Arg Lys Arg Glu Arg Arg Pro Leu
180 185 190
Pro Lys Asn Ala Arg Pro Ser Pro Trp Val Pro Ala Leu Ala Asp Glu
195 200 205
Trp Asn Thr Leu Asp Gln Glu Val Thr Thr Thr Arg Leu Pro Ala Gly
210 215 220
Ser Gln Glu Pro Val Lys Asp Val His Val Ala Arg Gly Phe Ser Tyr
225 230 235 240
Arg Lys Ser Val His Gln Ile Pro Ala Gln Arg Asp Leu Tyr Arg Asp
245 250 255
Phe Arg Lys Glu Asn Val Gly Asn Val Val Ser Leu Gly Ser Ala Val
260 265 270
Ser Thr Ser Asn Lys Ile Thr Arg Leu Glu Gln Arg Lys Glu Pro Trp
275 280 285
Thr Leu Gly Leu His Ser Ser Asn Lys Arg Ser Ile Leu Arg Ser Asn
290 295 300
Tyr Val Lys Glu Lys Ser Val His Ala Ile Gln Val Pro Ala Arg Ser
305 310 315 320
Ala Gly Lys Thr Trp Arg Glu Gln Gln Gln Trp Gly Leu Glu Asp Glu
325 330 335
Lys Ile Ala Gly Val His Trp Ser Tyr Glu Glu Thr Lys Thr Phe Leu
340 345 350
Ala Ile Leu Lys Glu Ser Arg Phe Tyr Glu Thr Leu Gln Ala Cys Pro
355 360 365
Arg Asn Ser Gln Val Tyr Gly Ala Val Ala Glu Trp Leu Arg Glu Cys
370 375 380
Gly Phe Leu Arg Thr Pro Glu Gln Cys Arg Thr Lys Phe Lys Ser Leu
385 390 395 400
Gln Lys Ser Tyr Arg Lys Val Arg Asn Gly His Met Leu Glu Pro Cys

His Ser Pro Cys Tyr Thr Leu Leu Leu Gln His Trp Val Cys Gln Ala
 65 70 75 80
 Ser Gly Asp Asn His Ser Asn Leu Leu Pro Phe Leu Leu Pro Ala Gln
 85 90 95
 Asp Arg Thr Leu Ile Phe Pro Thr Phe Leu Met Val Gly His Lys Thr
 100 105 110
 His Ser Arg Asp Gly Pro Thr Pro Tyr Pro Ala Arg Arg Asn Ala Ala
 115 120 125
 Val Met Lys Leu Pro
 130

<210> 567

<211> 502

<212> PRT

<213> Homo sapiens

<400> 567

Met Val Gln Tyr His Gly Ala Glu Ala Ala Gln Arg Phe Ile Leu Thr
 1 5 10 15
 Val Met Asn Met Val Tyr Asn Met Phe Gln His Gln Ser Leu Gly Ile
 20 25 30
 Lys Ile Asn Ile Gln Val Thr Lys Leu Val Leu Leu Arg Gln Arg Pro
 35 40 45
 Ala Lys Leu Ser Ile Gly His His Gly Glu Arg Ser Leu Glu Ser Phe
 50 55 60
 Cys His Trp Gln Asn Glu Glu Tyr Gly Gly Ala Arg Tyr Leu Gly Asn
 65 70 75 80
 Asn Gln Val Pro Gly Gly Lys Asp Asp Pro Pro Leu Val Asp Ala Ala

| | | | |
|---|-----|-----|-----|
| | 85 | 90 | 95 |
| Val Phe Val Thr Arg Thr Asp Phe Cys Val His Lys Asp Glu Pro Cys | | | |
| 100 | 105 | 110 | |
| Asp Thr Val Gly Ile Ala Tyr Leu Gly Gly Val Cys Ser Ala Lys Arg | | | |
| 115 | 120 | 125 | |
| Lys Cys Val Leu Ala Glu Asp Asn Gly Leu Asn Leu Ala Phe Thr Ile | | | |
| 130 | 135 | 140 | |
| Ala His Glu Leu Gly His Asn Leu Gly Met Asn His Asp Asp Asp His | | | |
| 145 | 150 | 155 | 160 |
| Ser Ser Cys Ala Gly Arg Ser His Ile Met Ser Gly Glu Trp Val Lys | | | |
| 165 | 170 | 175 | |
| Gly Arg Asn Pro Ser Asp Leu Ser Trp Ser Ser Cys Ser Arg Asp Asp | | | |
| 180 | 185 | 190 | |
| Leu Glu Asn Phe Leu Lys Ser Lys Val Ser Thr Cys Leu Leu Val Thr | | | |
| 195 | 200 | 205 | |
| Asp Pro Arg Ser Gln His Thr Val Arg Leu Pro His Lys Leu Pro Gly | | | |
| 210 | 215 | 220 | |
| Met His Tyr Ser Ala Asn Glu Gln Cys Gln Ile Leu Phe Gly Met Asn | | | |
| 225 | 230 | 235 | 240 |
| Ala Thr Phe Cys Arg Asn Met Glu His Leu Met Cys Ala Gly Leu Trp | | | |
| 245 | 250 | 255 | |
| Cys Leu Val Glu Gly Asp Thr Ser Cys Lys Thr Lys Leu Asp Pro Pro | | | |
| 260 | 265 | 270 | |
| Leu Asp Gly Thr Glu Cys Gly Ala Asp Lys Trp Cys Arg Ala Gly Glu | | | |
| 275 | 280 | 285 | |
| Cys Val Ser Lys Thr Pro Ile Pro Glu His Val Asp Gly Asp Trp Ser | | | |
| 290 | 295 | 300 | |
| Pro Trp Gly Ala Trp Ser Met Cys Ser Arg Thr Cys Gly Thr Gly Ala | | | |
| 305 | 310 | 315 | 320 |

Arg Phe Arg Gln Arg Lys Cys Asp Asn Pro Pro Pro Gly Pro Gly Gly
325 330 335
Thr His Cys Pro Gly Ala Ser Val Glu His Ala Val Cys Glu Asn Leu
340 345 350
Pro Cys Pro Lys Gly Leu Pro Ser Phe Arg Asp Gln Gln Cys Gln Ala
355 360 365
His Asp Arg Leu Ser Pro Lys Lys Lys Gly Leu Leu Thr Ala Val Val
370 375 380
Val Asp Asp Lys Pro Cys Glu Leu Tyr Cys Ser Pro Leu Gly Lys Glu
385 390 395 400
Ser Pro Leu Leu Val Ala Asp Arg Val Leu Asp Gly Thr Pro Cys Gly
405 410 415
Pro Tyr Glu Thr Asp Leu Cys Val His Gly Lys Cys Gln Lys Ile Gly
420 425 430
Cys Asp Gly Ile Ile Gly Ser Ala Ala Lys Glu Asp Arg Cys Gly Val
435 440 445
Cys Ser Gly Asp Gly Lys Thr Cys His Leu Ala Lys Gly Asp Phe Ser
450 455 460
His Ala Arg Gly Thr Gly Tyr Ile Glu Ala Ala Val Ile Pro Ala Gly
465 470 475 480
Ala Arg Arg Ile Arg Val Val Glu Asp Lys Pro Ala His Ser Phe Leu
485 490 495
Gly Lys Thr Gln Met Thr
500

<210> 568

<211> 356

<212> PRT

<213> Homo sapiens

<400> 568

```

Met Val Ile Lys Gln Met Leu Ile Arg Asp Pro Phe Pro Ser Leu Ser
  1             5             10             15
Leu Ala Gln Ile Ala Met Asp Arg Met Lys Lys Ile Lys Arg Gln Leu
      20             25             30
Ser Met Thr Leu Arg Gly Gly Arg Gly Ile Asp Lys Thr Asn Gly Ala
      35             40             45
Pro Glu Gln Ile Gly Leu Asp Glu Ser Gly Gly Gly Gly Gly Ser Asp
      50             55             60
Pro Gly Glu Ala Pro Thr Arg Ala Ala Pro Gly Glu Leu Arg Ser Ala
      65             70             75             80
Arg Gly Pro Leu Ser Ser Ala Pro Glu Ile Val His Glu Asp Leu Lys
      85             90             95
Met Gly Ser Asp Gly Glu Ser Asp Gln Ala Ser Ala Thr Ser Ser Asp
      100            105            110
Glu Val Gln Ser Pro Val Arg Val Arg Met Arg Asn His Pro Pro Arg
      115            120            125
Lys Ile Ser Thr Glu Asp Ile Asn Lys Arg Leu Ser Leu Pro Ala Asp
      130            135            140
Ile Arg Leu Pro Glu Gly Tyr Leu Glu Lys Leu Thr Leu Asn Ser Pro
      145            150            155            160
Ile Phe Asp Lys Pro Leu Ser Arg Arg Leu Arg Arg Val Ser Leu Ser
      165            170            175
Glu Ile Gly Phe Gly Lys Leu Glu Thr Tyr Ile Lys Leu Asp Lys Leu
      180            185            190
Gly Glu Gly Thr Tyr Ala Thr Val Tyr Lys Gly Lys Ser Lys Leu Thr
      195            200            205

```

Asp Asn Leu Val Ala Leu Lys Glu Ile Arg Leu Glu His Glu Glu Gly
 210 215 220
 Ala Pro Cys Thr Ala Ile Arg Glu Val Ser Leu Leu Lys Asp Leu Lys
 225 230 235 240
 His Ala Asn Ile Val Thr Leu His Asp Ile Ile His Thr Glu Lys Ser
 245 250 255
 Leu Thr Leu Val Phe Glu Tyr Leu Asp Lys Asp Leu Lys Gln Tyr Leu
 260 265 270
 Asp Asp Cys Gly Asn Ile Ile Asn Met His Asn Val Lys Val Gly Val
 275 280 285
 Gly Gln Glu Ala Gly Ala Gln Gly Gly Pro His Ser Pro Thr Pro Thr
 290 295 300
 His Lys Ser Pro Arg Asn Gly Leu Phe Pro Leu Ala Phe Phe Ala Arg
 305 310 315 320
 Ser Pro Trp Arg Ala Leu Gly Pro Cys Pro Leu Leu Cys Asp Lys Ala
 325 330 335
 Leu Gly Leu Val Ser Val Phe Gly Arg Gly Ala Val Pro Ala Gly Gly
 340 345 350
 Arg Ala Ser Gly
 355

<210> 569

<211> 126

<212> PRT

<213> Homo sapiens

<400> 569

Met Met Ile Thr Ala His Tyr Ser Leu Asp Phe Thr Gly Ser Gly Asp

| | | | |
|-----|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| Phe | Pro | Thr | Ser |
| Ala | Ser | Arg | Val |
| Ala | Gly | Thr | Thr |
| Gly | Thr | His | His |
| 20 | 25 | 30 | |
| His | Thr | Gln | Leu |
| Ile | Phe | Cys | Ile |
| Phe | Ser | Arg | Gly |
| Arg | Val | Leu | Pro |
| 35 | 40 | 45 | |
| Cys | Cys | Pro | Gly |
| Trp | Ser | Arg | Thr |
| Pro | Gly | Leu | Lys |
| Gln | Ser | Ala | His |
| 50 | 55 | 60 | |
| Leu | Gly | Leu | Pro |
| Lys | Cys | Trp | Ile |
| Thr | Gly | Met | Ser |
| Arg | Cys | Ala | Gln |
| 65 | 70 | 75 | 80 |
| Pro | Lys | Ile | Ile |
| Phe | Ile | Leu | Phe |
| Ile | Gly | Ser | Ser |
| Phe | Ile | Ala | Leu |
| 85 | 90 | 95 | |
| Glu | Ile | Gln | Ala |
| Ala | Arg | Tyr | Cys |
| Asp | Trp | Cys | Ile |
| Trp | Thr | Tyr | Leu |
| 100 | 105 | 110 | |
| Trp | Ser | Lys | Thr |
| Gly | Thr | His | Gln |
| Ile | Val | Ala | Leu |
| Ala | Asn | | |
| 115 | 120 | 125 | |

<210> 570

<211> 141

<212> PRT

<213> Homo sapiens

<400> 570

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Leu | Trp | Thr | Leu | Gln | Tyr | Lys | Cys | Leu | Thr | Lys | Ser | Leu | Leu |
| 1 | 5 | 10 | 15 | | | | | | | | | | | | |
| Leu | Ile | Leu | Trp | Gly | Ile | Tyr | Ile | Lys | Val | Glu | Leu | Leu | Asp | His | Leu |
| 20 | 25 | 30 | | | | | | | | | | | | | |
| Val | Val | Leu | His | Phe | Thr | Phe | Phe | Arg | Asp | Cys | His | Ile | Val | Phe | His |
| 35 | 40 | 45 | | | | | | | | | | | | | |

Ser Asp Cys Thr Ile Leu Tyr Ser Leu Arg Gln Tyr Ala Arg Val Leu
 50 55 60

Ile Ser Pro Tyr Ser His Gln His Leu Phe Ser Val Leu Arg Ile Ile
 65 70 75 80

Ala Ile Leu Arg Gly Val Met Trp Tyr Leu Ile Glu Val Ser Ile Cys
 85 90 95

Ile Ser Leu Met Ile Ser Asp Val Glu Cys Phe Phe Met Tyr Phe Leu
 100 105 110

Ala Ile Cys Ile Ser Pro Leu Lys Lys Tyr Gln Tyr Gln Val Ile Cys
 115 120 125

Ser Cys Leu Ile Glu Leu Leu Cys Cys Gly Gly Phe Tyr
 130 135 140

<210> 571

<211> 152

<212> PRT

<213> Homo sapiens

<400> 571

Met Gly Phe His Tyr Val Gly Gln Ala Gly Leu Glu Leu Leu Thr Ser
 1 5 10 15

Gly Asp Pro Leu Ala Ser Ala Phe Gln Ser Ala Gly Ile Ile Gly Val
 20 25 30

Ser His Arg Thr Trp Gly Gly Tyr Cys Leu Lys Lys Lys Ser Pro Asp
 35 40 45

Ser Asp Pro Leu Ser Thr Trp Arg Thr Ser Thr Gly Arg Lys Gln Met
 50 55 60

Leu Gln Ile Phe Lys Tyr Pro Asp Gly Phe Gly Ser Gln Gly Glu Arg

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Leu Leu Glu Val Asp Ala Ile Val Asn Ala Ala Asn Ala Ser Leu Leu
 85 90 95
 Gly Gly Gly Gly Val Asp Gly Cys Ile His Arg Ala Ala Gly Pro Cys
 100 105 110
 Leu Leu Ala Glu Cys Arg Asn Leu Asn Gly Cys Asp Thr Gly His Ala
 115 120 125
 Lys Ile Thr Cys Gly Tyr Asp Leu Pro Ala Lys Tyr Val Ile His Thr
 130 135 140
 Val Gly Pro Ile Ala Arg Ala Ile Leu Met Val Pro Thr Arg Lys Thr
 145 150 155 160
 Leu Gln Ile Ala Ile Asn His Leu
 165

<210> 573

<211> 151

<212> PRT

<213> Homo sapiens

<400> 573

Met Gly Leu Gly Gly Val Ser Arg Glu Ala Gly Leu Leu Leu Leu Ser
 1 5 10 15
 Ser Pro Cys Pro Asp Pro Ser Val Cys Leu Ser Asp Lys Pro Val Pro
 20 25 30
 Glu Glu Ser Glu Gly Pro Gly Ser Pro Pro Pro Tyr Lys Met Ile Gln
 35 40 45
 Thr Ile Gly Leu Ser Val Gly Ala Ala Val Ala Tyr Ile Ile Ala Val
 50 55 60
 Leu Gly Leu Met Phe Tyr Cys Lys Lys Arg Cys Lys Ala Lys Arg Leu

| | | | |
|---|-----|-----|----|
| 65 | 70 | 75 | 80 |
| Gln Lys Gln Pro Glu Gly Glu Glu Pro Glu Met Glu Cys Leu Asn Gly | | | |
| | 85 | 90 | 95 |
| Gly Pro Leu Gln Asn Gly Gln Pro Ser Ala Glu Ile Gln Glu Glu Val | | | |
| 100 | 105 | 110 | |
| Ala Leu Thr Ser Leu Gly Ser Gly Pro Ala Ala Thr Asn Lys Arg His | | | |
| 115 | 120 | 125 | |
| Ser Thr Ser Asp Lys Met His Phe Pro Arg Ser Ser Leu Gln Pro Ile | | | |
| 130 | 135 | 140 | |
| Thr Thr Leu Gly Met Leu Pro | | | |
| 145 | 150 | | |

<210> 574

<211> 182

<212> PRT

<213> Homo sapiens

<400> 574

| | | | |
|---|----|----|----|
| Met Leu Pro Thr Ala Ala Gly Phe Ser Ile Trp Gly Gln Val Gly Ala | | | |
| 1 | 5 | 10 | 15 |
| Ala Arg Glu Ala Pro Arg Cys Gln Thr Lys Ile Ser Ser Cys Ser Cys | | | |
| 20 | 25 | 30 | |
| Pro Thr Ser Ser Val Ser Ala Ala His Gly Pro Gly Pro Asn Glu Arg | | | |
| 35 | 40 | 45 | |
| Ala Arg Gly Leu Gly Gly Leu Pro Asp Pro Ala Leu Ser Pro Arg Val | | | |
| 50 | 55 | 60 | |
| Pro Phe Gln Gly Tyr Ala Arg Ile Val Phe Ala Ile Ile Ser Phe Tyr | | | |
| 65 | 70 | 75 | 80 |

Phe Met Pro Cys Cys Pro Leu Thr Ala Ser Ser Phe Tyr Leu Leu Ser
 85 90 95
 Gly Leu Leu Asp Ala Phe Asp Gly His Ala Ala Arg Ala Leu Asn Gln
 100 105 110
 Gly Thr Arg Phe Gly Ala Met Leu Asp Met Leu Thr Asp Arg Cys Ser
 115 120 125
 Thr Met Cys Leu Leu Val Asn Leu Ala Leu Leu Tyr Pro Gly Ala Thr
 130 135 140
 Leu Phe Phe Gln Ile Ser Met Ser Leu Asp Val Ala Ser His Trp Leu
 145 150 155 160
 His Leu His Arg Ser Ala Ala Ile Leu Gly Ala Trp Ala Thr Trp Arg
 165 170 175
 His Tyr Ser Gly Val Gly
 180

<210> 575

<211> 258

<212> PRT

<213> Homo sapiens

<400> 575

Met Gly Thr Leu Thr Phe His Leu Lys Ser Ser Phe Pro Gln Val Leu
 1 5 10 15
 Arg His Val Asn Gly Gln Asp Gln Ile Val Pro Gly Leu Tyr Ala Cys
 20 25 30
 Gly Glu Ala Ala Cys Ala Ser Val His Gly Ala Asn Arg Leu Gly Ala
 35 40 45
 Asn Ser Leu Leu Asp Leu Val Ala Phe Gly Arg Ala Cys Ala Pro Ser

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| 50 | 55 | 60 | | | | | | | | | | | | | | | | | |
| Ile | Glu | Glu | Ser | Cys | Arg | Pro | Gly | Asp | Lys | Val | Pro | Pro | Ile | Lys | Pro | | | | |
| 65 | | | | | | 70 | | | | | 75 | | | | 80 | | | | |
| Asn | Ala | Gly | Glu | Glu | Ser | Val | Met | Asn | Leu | Asp | Lys | Leu | Arg | Phe | Ala | | | | |
| | | | | 85 | | | | | | 90 | | | | 95 | | | | | |
| Asp | Gly | Ser | Ile | Arg | Thr | Ser | Glu | Leu | Arg | Leu | Ser | Met | Gln | Lys | Ser | | | | |
| | | | | 100 | | | | | 105 | | | | 110 | | | | | | |
| Met | Gln | Asn | His | Ala | Ala | Val | Phe | Arg | Val | Gly | Ser | Val | Leu | Gln | Glu | | | | |
| | | | 115 | | | | | 120 | | | | 125 | | | | | | | |
| Gly | Cys | Gly | Lys | Ile | Ser | Lys | Leu | Tyr | Gly | Asp | Leu | Lys | His | Leu | Lys | | | | |
| | | | 130 | | | | 135 | | | | | 140 | | | | | | | |
| Thr | Phe | Asp | Arg | Gly | Met | Val | Trp | Asn | Thr | Asp | Leu | Val | Glu | Thr | Leu | | | | |
| 145 | | | | | | 150 | | | | | 155 | | | | 160 | | | | |
| Glu | Leu | Gln | Asn | Leu | Met | Leu | Cys | Ala | Leu | Gln | Thr | Ile | Tyr | Gly | Ala | | | | |
| | | | | 165 | | | | | 170 | | | | 175 | | | | | | |
| Glu | Ala | Arg | Lys | Glu | Ser | Arg | Gly | Ala | His | Ala | Arg | Glu | Asp | Tyr | Lys | | | | |
| | | | 180 | | | | | | 185 | | | | 190 | | | | | | |
| Val | Arg | Ile | Asp | Glu | Tyr | Asp | Tyr | Ser | Lys | Pro | Ile | Gln | Gly | Gln | Gln | | | | |
| | | | 195 | | | | | 200 | | | | 205 | | | | | | | |
| Lys | Lys | Pro | Phe | Glu | Glu | His | Trp | Arg | Lys | His | Thr | Leu | Ser | Tyr | Val | | | | |
| | | 210 | | | | 215 | | | | | 220 | | | | | | | | |
| Asp | Val | Gly | Thr | Gly | Lys | Val | Thr | Leu | Glu | Tyr | Arg | Pro | Val | Ile | Asp | | | | |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | | | | | |
| Lys | Thr | Leu | Asn | Glu | Ala | Asp | Cys | Ala | Thr | Val | Pro | Pro | Ala | Ile | Arg | | | | |
| | | | | 245 | | | | | | 250 | | | | 255 | | | | | |
| Ser | Tyr | | | | | | | | | | | | | | | | | | |

<210> 576

<211> 149

<212> PRT

<213> Homo sapiens

<400> 576

Met Tyr Met Glu Pro Ser Ala Arg Ser Ala Gly Tyr Ser Pro Gln Gln

1 5 10 15

Lys Arg Leu Ser Lys Thr Arg Ile Pro Arg Leu Gln Ser Leu Thr Asp

20 25 30

Gln Ala Ala Leu Trp Gly Thr Thr Cys Asp Gln Val Asn Ala Lys Gln

35 40 45

Gly Pro Lys Pro Ser Pro Gly His Arg Leu Arg Arg Asn Leu Pro Gly

50 55 60

Glu Lys Trp Glu Ile Asp Phe Thr Lys Val Lys Pro His Gln Ala Gly

65 70 75 80

Tyr Lys Tyr Leu Leu Val Leu Val Asp Thr Phe Ser Gly Trp Thr Glu

85 90 95

Ala Phe Ala Thr Lys Asn Glu Thr Ala Asn Leu Val Val Lys Phe Leu

100 105 110

Leu Asn Glu Ile Ile Pro Arg Tyr Gly Leu Pro Ala Ala Ile Gly Ser

115 120 125

Asp Asn Gly Pro Ala Phe Thr Ser Ser Ile Val Leu Ser Val Ser Lys

130 135 140

Ala Leu Asn Ile Gln

145

<210> 577

<211> 602

<212> PRT

<213> Homo sapiens

<400> 577

Met Glu Ser Gln Ala Thr Ser Ala Ser Ile Asn Asn Ser Asn Pro Ser

1 5 10 15

Thr Ser Glu Gln Ala Ser Asp Thr Ala Ser Ala Val Thr Ser Ser Gln

20 25 30

Pro Ser Thr Val Ser Glu Thr Ser Ala Thr Leu Thr Ser Asn Ser Thr

35 40 45

Thr Gly Thr Ser Ile Gly Asp Asp Ser Arg Arg Thr Thr Ser Ser Ala

50 55 60

Val Thr Glu Thr Gly Pro Pro Ala Met Pro Arg Leu Pro Ser Cys Cys

65 70 75 80

Pro Gln His Ser Pro Cys Gly Gly Ser Ser Gln Asn His His Ala Leu

85 90 95

Gly His Pro His Thr Ser Cys Phe Gln Gln His Gly His His Phe Gln

100 105 110

His His His His His His His Thr Pro His Pro Ala Val Pro Val Ser

115 120 125

Pro Ser Phe Ser Asp Pro Ala Cys Pro Val Glu Arg Pro Pro Gln Val

130 135 140

Gln Ala Pro Cys Gly Ala Asn Ser Ser Ser Gly Thr Ser Tyr His Glu

145 150 155 160

Gln Gln Ala Leu Pro Val Asp Leu Ser Asn Ser Gly Ile Arg Ser His

165 170 175

Gly Ser Gly Ser Phe His Gly Ala Ser Ala Phe Asp Pro Cys Cys Pro

180 185 190

Val Ser Ser Ser Arg Ala Ala Ile Phe Gly His Gln Ala Ala Ala Ala
 195 200 205
 Ala Pro Ser Gln Pro Leu Ser Ser Ile Asp Gly Tyr Gly Ser Ser Met
 210 215 220
 Val Ala Gln Pro Gln Pro Gln Pro Pro Pro Gln Pro Ser Leu Ser Ser
 225 230 235 240
 Cys Arg His Tyr Met Pro Pro Pro Tyr Ala Ser Leu Thr Arg Pro Leu
 245 250 255
 His His Gln Ala Ser Ala Cys Pro His Ser His Gly Asn Pro Pro Pro
 260 265 270
 Gln Thr Gln Pro Pro Pro Gln Val Asp Tyr Val Ile Pro His Pro Val
 275 280 285
 His Ala Phe His Ser Gln Ile Ser Ser His Ala Thr Ser His Pro Val
 290 295 300
 Ala Pro Pro Pro Pro Thr His Leu Ala Ser Thr Ala Ala Pro Ile Pro
 305 310 315 320
 Gln His Leu Pro Pro Thr His Gln Pro Ile Ser His His Ile Pro Ala
 325 330 335
 Thr Ala Pro Pro Ala Gln Arg Leu His Pro His Glu Val Met Gln Arg
 340 345 350
 Met Glu Val Gln Arg Arg Arg Met Met Gln His Pro Thr Gly Leu Phe
 355 360 365
 Val Phe Cys Val Ser Arg Arg Ala His Glu Arg Pro Pro Pro His Pro
 370 375 380
 His Arg Met His Pro Asn Tyr Gly His Gly His His Ile His Val Pro
 385 390 395 400
 Gln Thr Met Ser Ser His Pro Arg Gln Ala Pro Glu Arg Ser Ala Trp
 405 410 415
 Glu Leu Gly Ile Glu Ala Gly Val Thr Ala Ala Thr Tyr Thr Pro Gly

420 425 430
 Ala Leu His Pro His Leu Ala His Tyr His Ala Pro Pro Arg Leu His
 435 440 445
 His Leu Gln Leu Gly Ala Leu Pro Leu Met Val Pro Asp Met Ala Gly
 450 455 460
 Tyr Pro His Ile Arg Tyr Ile Ser Ser Gly Leu Asp Gly Thr Ser Phe
 465 470 475 480
 Arg Gly Pro Phe Arg Gly Asn Phe Glu Glu Leu Ile His Leu Glu Glu
 485 490 495
 Arg Leu Gly Asn Val Asn Arg Gly Ala Ser Gln Gly Thr Ile Glu Arg
 500 505 510
 Cys Thr Tyr Pro His Lys Tyr Lys Lys Val Thr Thr Asp Trp Phe Ser
 515 520 525
 Gln Arg Lys Leu His Cys Lys Gln Asp Gly Glu Glu Gly Thr Glu Glu
 530 535 540
 Asp Thr Glu Glu Lys Cys Thr Ile Cys Leu Ser Ile Leu Glu Glu Gly
 545 550 555 560
 Glu Asp Val Arg Arg Leu Pro Cys Met His Leu Phe His Gln Val Cys
 565 570 575
 Val Asp Gln Trp Leu Ile Thr Asn Lys Lys Cys Pro Ile Cys Arg Val
 580 585 590
 Asp Ile Glu Ala Gln Leu Pro Ser Glu Ser
 595 600

<210> 578

<211> 116

<212> PRT

<213> Homo sapiens

<400> 578

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Ser | Gly | Met | Gly | Met | Gly | Asn | Arg | Asp | Thr | Asn | Pro | Asn | Gly |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Lys | Pro | Leu | Ala | Lys | Gln | Pro | Pro | Glu | Phe | Val | Leu | Ile | Val | Tyr | Ser |
| | | | 20 | | | | | 25 | | | | | | 30 | |
| Gln | Ser | Leu | Ala | Thr | Ala | His | Thr | Leu | Phe | Phe | Ser | Tyr | Lys | Gln | Lys |
| | | | 35 | | | | | 40 | | | | | | 45 | |
| Glu | Leu | Ser | Leu | Ser | Ala | Met | Asn | Pro | Ala | Ile | Pro | Arg | Lys | Lys | Ala |
| | | | 50 | | | | | 55 | | | | | | 60 | |
| Asn | Ala | Leu | Ala | Ser | Ser | Pro | Val | Arg | Ala | Thr | His | Ser | Ile | Ser | Thr |
| | | | 65 | | | | | 70 | | | | | | 75 | |
| Phe | Cys | Met | Leu | Lys | Leu | Cys | His | Arg | Arg | Arg | Ala | Ser | Ala | His | Asp |
| | | | | | | | | 85 | | | | | | 90 | |
| Gln | Phe | Phe | Phe | Trp | Ser | Ile | Gly | Ser | Phe | Cys | Leu | Arg | Ile | Phe | Val |
| | | | | | | | | 100 | | | | | | 105 | |
| Cys | Val | Tyr | Leu | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 115 |

<210> 579

<211> 376

<212> PRT

<213> Homo sapiens

<400> 579

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Asp | Ser | Arg | Arg | Val | Ile | Ile | Ala | Ser | Trp | Tyr | Arg | Thr | Phe |
| 1 | | | | | | | | | | | | | | | 15 |
| Met | Gly | Ile | Val | Asn | Leu | Phe | Gly | Leu | Glu | Thr | Lys | Thr | Cys | Trp | Asn |

| | | |
|---|-----|-----|
| 20 | 25 | 30 |
| Val Thr Arg Ile Glu Pro Leu Asn Glu Val Gln Ser Cys Glu Gly Leu | | |
| 35 | 40 | 45 |
| Arg Asp Pro Ala Cys Phe Tyr Val Gly Val Ile Phe Ile Leu Asn Gly | | |
| 50 | 55 | 60 |
| Leu Met Met Gly Leu Phe Phe Ile Tyr Gly Thr Tyr Leu Ser Gly Thr | | |
| 65 | 70 | 75 |
| Glu Leu Gly Gly Leu Ile Thr Val Leu Cys Phe Phe Phe Asn His Gly | | |
| 85 | 90 | 95 |
| Glu Ala Thr Cys Val Met Trp Thr Pro Pro Leu Arg Glu Ser Phe Ser | | |
| 100 | 105 | 110 |
| Tyr Pro Phe Leu Val Leu Gln Met Tyr Val Leu Thr Leu Ile Leu Arg | | |
| 115 | 120 | 125 |
| Thr Ser Ser Asn Asp Arg Arg Pro Phe Ile Ala Leu Cys Leu Ser Asn | | |
| 130 | 135 | 140 |
| Val Ala Phe Met Leu Pro Trp Gln Phe Ala Gln Phe Ile Leu Phe Thr | | |
| 145 | 150 | 155 |
| Gln Ile Ala Ser Leu Phe Pro Met Tyr Val Val Gly Tyr Ile Glu Pro | | |
| 165 | 170 | 175 |
| Ser Lys Phe Gln Lys Ile Ile Tyr Met Asn Met Ile Ser Val Thr Leu | | |
| 180 | 185 | 190 |
| Ser Phe Ile Leu Met Phe Gly Asn Ser Met Tyr Leu Ser Ser Tyr Tyr | | |
| 195 | 200 | 205 |
| Ser Ser Ser Leu Leu Met Thr Trp Ala Ile Ile Leu Lys Arg Asn Glu | | |
| 210 | 215 | 220 |
| Ile Gln Lys Leu Gly Val Ser Lys Leu Asn Cys Trp Leu Ile Gln Gly | | |
| 225 | 230 | 235 |
| Ser Ala Trp Trp Cys Gly Thr Ile Ile Leu Lys Phe Leu Thr Ser Lys | | |
| 245 | 250 | 255 |

Ile Leu Gly Val Ser Asp His Ile Cys Leu Ser Asp Leu Ile Ala Ala

260

265

270

Gly Thr Leu Arg Tyr Thr Asp Phe Asp Thr Leu Lys Tyr Thr Cys Ser

275

280

285

Pro Glu Phe Asp Phe Met Glu Lys Ala Thr Leu Leu Ile Tyr Thr Lys

290

295

300

Thr Leu Leu Leu Pro Val Val Met Val Ile Thr Cys Phe Ile Phe Lys

305

310

315

320

Lys Thr Val Gly Asp Ile Ser Arg Val Leu Ala Thr Asn Val Tyr Leu

325

330

335

Arg Cys Cys Leu Cys Arg Cys His Ala Tyr Asn Gly Lys Cys Gln Ala

340

345

350

Val Tyr Thr Ser Ser His Cys Glu Ser Ser Thr Leu Arg Arg Cys Arg

355

360

365

Leu Glu Ala Trp Leu Gln His Ala

370

375

<210> 580

<211> 109

<212> PRT

<213> Homo sapiens

<400> 580

Met Tyr Pro Ala Leu Leu Val Pro Ser Ser Ser Pro Ser Ser Val Phe

1

5

10

15

Gly Val Pro Glu Thr Gly Phe Ser Gln Trp Pro Gly Pro Gln Gly Asn

20

25

30

Cys Arg Val Ile Gln Ser Gly Ser Ala Ser Leu Gln Gly Pro Leu Pro

35 40 45
 Gly Arg Ala Ser Trp His Pro Ala Ile Gly Gly Pro Asp Thr Pro Ala
 50 55 60
 Arg Asp Pro Ala Thr Gln Glu Val Pro Thr Pro Ser Gln Ser Asp Pro
 65 70 75 80
 Gly Pro Arg Ala Asp Arg Ser Pro Pro Leu Lys Arg Leu Leu Pro Leu
 85 90 95
 Tyr Pro Thr Pro Arg Asp Ser Phe His Ser Gly Ile Ser
 100 105

<210> 581

<211> 363

<212> PRT

<213> Homo sapiens

<400> 581

Met Pro Val Arg Thr Leu Phe Pro Glu Ser Trp Leu Trp Arg Lys Phe
 1 5 10 15
 Thr Leu Pro Lys Ser Lys Ser Gly Ile Ser His Tyr Pro Ile Ser Val
 20 25 30
 Lys Val Pro Asp Ser Ile Thr Thr Trp Gln Phe Val Val Val Ser Leu
 35 40 45
 Lys Ala Gly Gln Gly Leu Cys Val Ser Asp Pro Phe Glu Leu Thr Val
 50 55 60
 Met Lys Ser Phe Phe Val Asp Leu Lys Leu Pro Ser Ser Val Ile Arg
 65 70 75 80
 Asn Glu Gln Val Gln Ile Gln Ala Met Leu Tyr Asn Phe Arg Asp Arg
 85 90 95

Gln Ala Lys Val Arg Val Glu Phe Pro His Lys Glu Thr Leu Cys Ser
100 105 110
Ala Ser Lys Pro Gly Ala Pro Ser His Gln Ala Gly Val Gln Ile Gln
115 120 125
Gln Thr Ser Tyr Ser Ile Val Leu Glu Pro Gln Gly Gln Thr Gln Thr
130 135 140
Lys Leu Val Pro Arg Gln Glu Phe Leu Asn Met Val Pro Asp Thr Glu
145 150 155 160
Ala Glu Val Phe Ile Ser Val Gln Gly Tyr Thr Gln Met Leu Thr His
165 170 175
Arg Ser Ser Asp Gly Thr Tyr His Thr Ser Lys Gly Asn Pro Gly Ser
180 185 190
Thr Trp Leu Thr Ser Tyr Val Phe Arg Val Phe Ala Leu Ala Tyr Ser
195 200 205
Met Met Thr Thr Gln Val Leu Ser Leu Ser Ser Leu Cys Asp Met Ala
210 215 220
Asn Trp Ile Ile Ile Asp Arg Gln Ala Glu Asp Gly His Phe Leu Glu
225 230 235 240
Lys Gly Pro Val Val Met Thr Ser Met Gln Asp Gly Tyr Gln Gly Ser
245 250 255
Glu Glu Asp Val Ser Leu Thr Ala Leu Val Leu Ile Ala Leu Asn Glu
260 265 270
Gly Lys Glu Leu Cys Arg Gln Lys Asn Leu Met Ala Ser Ile Glu Arg
275 280 285
Ala Arg Gly Phe Leu Glu Arg Lys Leu Pro Asp Ile Gln Thr Thr Phe
290 295 300
Ala Val Ala Ile Ala Ser Tyr Ala Leu Ala Leu Ala Asn Ser Ser Gln
305 310 315 320
Ala Asn Asp Cys Leu Asp Ser Phe Ala Ser Pro Ser Gly Cys Gly Met

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 325 | | 330 | | 335 | | | | | | | | | | |
| Leu | Leu | Asn | Gln | Pro | Gln | Ser | Trp | Ser | Gly | Glu | Gly | Val | Ile | Ser | Asn |
| | 340 | | | | 345 | | | | | | | 350 | | | |
| Pro | Ala | Met | Cys | Tyr | Ser | Ser | Leu | Ser | Val | Ser | | | | | |
| | 355 | | | | | | 360 | | | | | | | | |

<210> 582

<211> 359

<212> PRT

<213> Homo sapiens

<400> 582

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Pro | Thr | Ser | Ser | Thr | Pro | Ser | Leu | Ser | Arg | Pro | Gly | Leu | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Ala | Gly | Lys | Pro | Asp | Thr | Gly | Ser | His | Pro | Pro | Pro | Thr | Ile | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Ser | Ile | Phe | Leu | Ser | Cys | Phe | Pro | Thr | Ile | Pro | Leu | Ser | Arg | Pro |
| | | | 35 | | | | | 40 | | | | | 45 | | |
| Arg | Thr | Thr | Gly | Pro | Ser | His | Ser | Tyr | Gln | Ser | Ile | Ser | His | Pro | Arg |
| | | | 50 | | | | 55 | | | | 60 | | | | |
| Ser | Cys | Arg | Asp | Val | Pro | Asp | Asp | Ile | Gln | Pro | Ile | Thr | Ser | Leu | Pro |
| | 65 | | | | 70 | | | | 75 | | | | | 80 | |
| Gly | Val | Ala | Arg | Tyr | Gly | Val | Lys | Arg | Leu | Glu | Glu | Met | Leu | Arg | Pro |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Leu | Val | Glu | Glu | Gly | Leu | Arg | Cys | Val | Leu | Ile | Phe | Gly | Val | Pro | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Val | Pro | Lys | Asp | Glu | Arg | Gly | Ser | Ala | Ala | Asp | Ser | Glu | Glu | Ser |
| | | | 115 | | | | | 120 | | | | | 125 | | |

Pro Ala Ile Glu Ala Ile His Leu Leu Arg Lys Thr Phe Pro Asn Leu

130

135

140

Leu Val Ala Cys Asp Val Cys Leu Cys Pro Tyr Thr Ser His Gly His

145

150

155

160

Cys Gly Leu Leu Ser Glu Asn Gly Ala Phe Arg Ala Glu Glu Ser Arg

165

170

175

Gln Arg Leu Ala Glu Val Ala Leu Ala Tyr Ala Lys Ala Gly Cys Gln

180

185

190

Val Val Ala Pro Ser Asp Met Met Asp Gly Arg Val Glu Ala Ile Lys

195

200

205

Glu Ala Leu Met Ala His Gly Leu Gly Asn Arg Val Ser Val Met Ser

210

215

220

Tyr Ser Ala Lys Phe Ala Ser Cys Phe Tyr Gly Pro Phe Arg Asp Ala

225

230

235

240

Ala Lys Ser Ser Pro Ala Phe Gly Asp Arg Arg Cys Tyr Gln Leu Pro

245

250

255

Pro Gly Ala Arg Gly Leu Ala Leu Arg Ala Val Asp Arg Asp Val Arg

260

265

270

Glu Gly Ala Asp Met Leu Met Val Lys Pro Gly Met Leu Tyr Leu Asp

275

280

285

Ile Val Arg Glu Val Lys Asp Lys His Pro Asp Leu Pro Leu Ala Val

290

295

300

Tyr His Val Ser Gly Glu Phe Ala Met Leu Trp His Gly Ala Gln Ala

305

310

315

320

Gly Ala Phe Asp Leu Lys Ala Ala Val Leu Glu Ala Met Thr Ala Phe

325

330

335

Arg Arg Ala Gly Ala Asp Ile Ile Ile Thr Tyr Tyr Thr Pro Gln Leu

340

345

350

Leu Gln Trp Leu Lys Glu Glu

355

<210> 583

<211> 508

<212> PRT

<213> Homo sapiens

<400> 583

Met Met Trp Gly Gly Gly Leu Asp Leu Cys Pro Met Pro Gly Gln Leu

1 5 10 15

Lys Phe Pro Pro Cys Leu Ser Arg Cys Leu Leu Trp Glu Pro Pro Ser

20 25 30

Leu Tyr Leu Thr Gln Pro Thr Ser Ser Leu Ala Glu Pro Gln Ala Leu

35 40 45

Ile Cys Met Thr Ser Ser Ser Ser Gly Leu Phe Ile Gln Asp Asp Asn

50 55 60

Met Glu Lys Leu Glu Glu Ile Ile Glu Lys Tyr Pro Arg Ala Phe Pro

65 70 75 80

Phe Trp Ile Gly Pro Phe Gln Ala Phe Phe Cys Ile Tyr Asp Pro Asp

85 90 95

Tyr Ala Lys Thr Leu Leu Ser Arg Thr Asp Pro Lys Ser Gln Tyr Leu

100 105 110

Gln Lys Phe Ser Pro Pro Leu Leu Gly Lys Gly Leu Ala Ala Leu Asp

115 120 125

Gly Pro Lys Trp Phe Gln His Arg Arg Leu Leu Thr Pro Gly Phe His

130 135 140

Phe Asn Ile Leu Lys Ala Tyr Ile Glu Val Met Ala His Ser Val Lys

145 150 155 160

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Met | Leu | Asp | Lys | Trp | Glu | Lys | Ile | Cys | Ser | Thr | Gln | Asp | Thr | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Val | Glu | Val | Tyr | Glu | His | Ile | Asn | Ser | Met | Ser | Leu | Asp | Ile | Val | Met |
| | | | | 180 | | | | | 185 | | | | | 190 | |
| Lys | Cys | Ala | Phe | Ser | Lys | Glu | Thr | Asn | Cys | Gln | Thr | Asn | Ser | Thr | His |
| | | | | 195 | | | | | 200 | | | | | 205 | |
| Asp | Pro | Tyr | Ala | Lys | Ala | Ile | Phe | Glu | Leu | Ser | Lys | Ile | Ile | Phe | His |
| | | | | 210 | | | | | 215 | | | | | 220 | |
| Arg | Leu | Tyr | Ser | Leu | Leu | Tyr | His | Ser | Asp | Ile | Ile | Phe | Lys | Leu | Ser |
| | | | | 225 | | | | | 230 | | | | | 235 | |
| Pro | Gln | Gly | Tyr | Arg | Phe | Gln | Lys | Leu | Ser | Arg | Val | Leu | Asn | Gln | Tyr |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Thr | Asp | Thr | Ile | Ile | Gln | Glu | Arg | Lys | Lys | Ser | Leu | Gln | Ala | Gly | Val |
| | | | | 260 | | | | | 265 | | | | | 270 | |
| Lys | Gln | Asp | Asn | Thr | Pro | Lys | Arg | Lys | Tyr | Gln | Asp | Phe | Leu | Asp | Ile |
| | | | | 275 | | | | | 280 | | | | | 285 | |
| Val | Leu | Ser | Ala | Lys | Asp | Glu | Ser | Gly | Ser | Ser | Phe | Ser | Asp | Ile | Asp |
| | | | | 290 | | | | | 295 | | | | | 300 | |
| Val | His | Ser | Glu | Val | Ser | Thr | Phe | Leu | Leu | Ala | Gly | His | Asp | Thr | Leu |
| | | | | 305 | | | | | 310 | | | | | 315 | |
| Ala | Ala | Ser | Ile | Ser | Trp | Ile | Leu | Tyr | Cys | Leu | Ala | Leu | Asn | Pro | Glu |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| His | Gln | Glu | Arg | Cys | Arg | Glu | Glu | Val | Arg | Gly | Ile | Leu | Gly | Asp | Gly |
| | | | | 340 | | | | | 345 | | | | | 350 | |
| Ser | Ser | Ile | Thr | Trp | Asp | Gln | Leu | Gly | Glu | Met | Ser | Tyr | Thr | Thr | Met |
| | | | | 355 | | | | | 360 | | | | | 365 | |
| Cys | Ile | Lys | Glu | Thr | Cys | Arg | Leu | Ile | Pro | Ala | Val | Pro | Ser | Ile | Ser |
| | | | | 370 | | | | | 375 | | | | | 380 | |
| Arg | Asp | Leu | Ser | Lys | Pro | Leu | Thr | Phe | Pro | Asp | Gly | Cys | Thr | Leu | Pro |

出証特 2 0 0 4 - 3 0 5 9 6 6 2

Leu Lys Val His Leu Lys Leu Val Glu Glu Glu Ala Asn Leu Leu Ser

50

55

60

Arg Arg Ile Val Glu Leu Glu Val Glu Asn Arg Gly Leu Arg Ala Glu

65

70

75

80

Met Asp Asp Met Lys Asp His Gly Gly Gly Cys Gly Gly Pro Glu Ala

85

90

95

Arg Leu Ala Phe Ser Ala Leu Gly Gly Gly Glu Cys Gly Glu Ser Leu

100

105

110

Ala Glu Leu Arg Arg His Leu Gln Phe Val Glu Glu Glu Ala Glu Leu

115

120

125

Leu Arg Arg Ser Ser Ala Glu Leu Glu Asp Gln Asn Lys Leu Leu Leu

130

135

140

Asn Glu Leu Ala Lys Phe Arg Ser Glu His Glu Leu Asp Val Ala Leu

145

150

155

160

Ser Glu Asp Ser Cys Ser Val Leu Ser Glu Pro Ser Gln Glu Glu Leu

165

170

175

Ala Ala Ala Lys Leu Gln Ile Gly Glu Leu Ser Gly Lys Val Lys Lys

180

185

190

Leu Gln Tyr Glu Asn Arg Val Leu Leu Ser Asn Leu Gln Arg Cys Asp

195

200

205

Leu Ala Ser Cys Gln Ser Thr Arg Pro Met Leu Glu Thr Asp Ala Glu

210

215

220

Ala Gly Asp Ser Ala Gln Cys Val Pro Ala Pro Leu Gly Glu Thr His

225

230

235

240

Glu Ser His Ala Val Arg Leu Cys Arg Ala Arg Glu Ala Glu Val Leu

245

250

255

Pro Gly Leu Arg Glu Gln Ala Ala Leu Val Ser Lys Ala Ile Asp Val

260

265

270

Leu Val Ala Asp Ala Asn Gly Phe Thr Ala Gly Leu Arg Leu Cys Leu

| | | |
|---|-----|-----|
| 275 | 280 | 285 |
| Asp Asn Glu Cys Ala Asp Phe Arg Leu His Glu Ala Pro Asp Asn Ser | | |
| 290 | 295 | 300 |
| Glu Gly Pro Arg Asp Thr Lys Leu Ile His Ala Ile Leu Val Arg Leu | | |
| 305 | 310 | 315 |
| Ser Val Leu Gln Gln Glu Leu Asn Ala Phe Thr Arg Lys Ala Asp Ala | | |
| 325 | 330 | 335 |
| Val Leu Gly Cys Ser Val Lys Glu Gln Gln Glu Ser Phe Ser Ser Leu | | |
| 340 | 345 | 350 |
| Pro Pro Leu Gly Ser Gln Gly Leu Ser Lys Glu Ile Leu Leu Ala Lys | | |
| 355 | 360 | 365 |
| Asp Leu Gly Ser Asp Phe Gln Pro Pro Asp Phe Arg Asp Leu Pro Glu | | |
| 370 | 375 | 380 |
| Trp Glu Pro Arg Ile Arg Glu Ala Phe Arg Thr Gly Asp Leu Asp Ser | | |
| 385 | 390 | 395 |
| Lys Pro Asp Pro Ser Arg Ser Phe Arg Pro Tyr Arg Ala Glu Asp Asn | | |
| 405 | 410 | 415 |
| Asp Ser Tyr Ala Ser Glu Ile Lys Glu Leu Gln Leu Val Leu Ala Glu | | |
| 420 | 425 | 430 |
| Ala His Asp Ser Leu Arg Gly Leu Gln Glu Gln Leu Ser Gln Glu Arg | | |
| 435 | 440 | 445 |
| Gln Leu Arg Lys Glu Glu Ala Asp Asn Phe Asn Gln Lys Met Val Gln | | |
| 450 | 455 | 460 |
| Leu Lys Glu Asp Gln Gln Arg Ala Leu Leu Arg Arg Glu Phe Glu Leu | | |
| 465 | 470 | 475 |
| Gln Ser Leu Ser Leu Gln Arg Arg Leu Glu Gln Lys Phe Trp Ser Gln | | |
| 485 | 490 | 495 |
| Glu Lys Asn Met Leu Val Gln Glu Ser Gln Gln Phe Lys His Asn Phe | | |
| 500 | 505 | 510 |

Leu Leu Leu Phe Met Lys Leu Arg Trp Phe Leu Lys Arg Trp Arg Gln
515 520 525

Gly Lys Val Leu Pro Ser Glu Gly Asp Asp Phe Leu Glu Val Asn Ser
530 535 540

Met Lys Val Leu Tyr Leu Leu Met Glu Glu Glu Glu Ile Asn Ala Gln
545 550 555 560

His Ser Asp Asn Lys Ala Cys Thr Gly Asp Ser Trp Thr Gln Asn Thr
565 570 575

Pro Asn Glu Tyr Ile Lys Thr Leu Ala Asp Met Lys Val Thr Leu Lys
580 585 590

Glu Leu Cys Trp Leu Leu Arg Asp Glu Arg Arg Gly Leu Thr Glu Leu
595 600 605

Gln Gln Gln Phe Ala Lys Ala Lys Ala Thr Trp Glu Thr Glu Arg Ala
610 615 620

Glu Leu Lys Gly His Thr Ser Gln Met Glu Leu Lys Thr Gly Lys Gly
625 630 635 640

Ala Gly Glu Arg Ala Gly Pro Asp Trp Lys Ala Ala Leu Gln Arg Glu
645 650 655

Arg Glu Glu Gln Gln His Leu Leu Ala Glu Ser Tyr Ser Ala Val Met
660 665 670

Glu Leu Thr Arg Gln Leu Gln Ile Ser Glu Arg Asn Trp Ser Gln Glu
675 680 685

Lys Leu Gln Leu Val Glu Arg Leu Gln Gly Glu Lys Gln Gln Val Glu
690 695 700

Gln Gln Val Lys Glu Leu Gln Asn Arg Leu Ser Gln Leu Gln Lys Ala
705 710 715 720

Ala Asp Pro Trp Val Leu Lys His Ser Glu Leu Glu Lys Gln Asp Asn
725 730 735

Ser Trp Lys Glu Thr Arg Ser Glu Lys Ile His Asp Lys Glu Ala Val

| | | |
|---|-----|-----|
| 740 | 745 | 750 |
| Ser Glu Val Glu Leu Gly Gly Asn Gly Leu Lys Arg Thr Lys Ser Val | | |
| 755 | 760 | 765 |
| Ser Ser Met Ser Glu Phe Glu Ser Leu Leu Asp Cys Ser Pro Tyr Leu | | |
| 770 | 775 | 780 |
| Ala Gly Gly Asp Ala Arg Gly Lys Lys Leu Pro Asn Asn Pro Ala Phe | | |
| 785 | 790 | 795 |
| Gly Phe Val Ser Ser Glu Pro Gly Asp Pro Glu Lys Asp Thr Lys Glu | | |
| 805 | 810 | 815 |
| Lys Pro Gly Leu Ser Ser Arg Asp Cys Asn His Leu Gly Ala Leu Ala | | |
| 820 | 825 | 830 |
| Cys Gln Asp Pro Pro Gly Arg Gln Met Gln Arg Ser Tyr Thr Ala Pro | | |
| 835 | 840 | 845 |
| Asp Lys Thr Gly Ile Arg Val Tyr Tyr Ser Pro Pro Val Ala Arg Arg | | |
| 850 | 855 | 860 |
| Leu Gly Val Pro Val Val His Asp Lys Glu Gly Lys Ile Ile Ile Glu | | |
| 865 | 870 | 875 |
| Pro Gly Phe Leu Phe Thr Thr Ala Lys Pro Lys Glu Ser Ala Glu Ala | | |
| 885 | 890 | 895 |
| Asp Gly Leu Ala Glu Ser Ser Tyr Gly Arg Trp Leu Cys Asn Phe Ser | | |
| 900 | 905 | 910 |
| Arg Gln Arg Leu Asp Gly Gly Ser Ala Gly Ser Pro Ser Ala Ala Gly | | |
| 915 | 920 | 925 |
| Pro Gly Phe Pro Ala Ala Leu His Asp Phe Glu Met Ser Gly Asn Met | | |
| 930 | 935 | 940 |
| Ser Asp Asp Met Lys Glu Ile Thr Asn Cys Val Arg Gln Ala Met Arg | | |
| 945 | 950 | 955 |
| Ser Gly Ser Leu Glu Arg Lys Val Lys Ser Thr Ser Ser Gln Thr Val | | |
| 965 | 970 | 975 |

Gly Leu Ala Ser Val Gly Thr Gln Thr Ile Arg Thr Val Ser Val Gly
980 985 990

Leu Gln Thr Asp Pro Pro Arg Ser Ser Leu His Gly Lys Ala Trp Ser
995 1000 1005

Pro Arg Ser Ser Ser Leu Val Ser Val Arg Ser Lys Gln Ile Ser Ser
1010 1015 1020

Ser Leu Asp Lys Val His Ser Arg Ile Glu Arg Pro Cys Cys Ser Pro
1025 1030 1035 1040

Lys Tyr Gly Ser Pro Lys Leu Gln Arg Arg Ser Val Ser Lys Leu Asp
1045 1050 1055

Ser Ser Lys Asp Arg Ser Leu Trp Asn Leu His Gln Gly Lys Gln Asn
1060 1065 1070

Gly Ser Ala Trp Ala Arg Ser Thr Thr Thr Arg Asp Ser Pro Val Leu
1075 1080 1085

Arg Asn Ile Asn Asp Gly Leu Ser Ser Leu Phe Ser Val Val Glu His
1090 1095 1100

Ser Gly Ser Thr Glu Ser Val Trp Lys Leu Gly Met Ser Glu Thr Arg
1105 1110 1115 1120

Ala Lys Pro Glu Pro Pro Lys Tyr Gly Ile Val Gln Glu Phe Phe Arg
1125 1130 1135

Asn Ala Cys Gly Arg Ala Pro Ser Pro Thr Ser Ser Ala Gly Glu Glu
1140 1145 1150

Gly Thr Lys Lys Pro Glu Pro Leu Ser Pro Ala Ser Tyr His Gln Pro
1155 1160 1165

Glu Gly Val Ala Arg Ile Leu Asn Lys Lys Ala Ala Lys Leu Gly Ser
1170 1175 1180

Ser Glu Glu Val Arg Leu Thr Met Leu Pro Gln Val Gly Lys Asp Gly
1185 1190 1195 1200

Val Leu Arg Asp Gly Asp Gly Ala Val Val Leu Pro Asn Glu Asp Ala

| | | |
|---|------|------|
| 1205 | 1210 | 1215 |
| Val Cys Asp Cys Ser Thr Gln Ser Leu Thr Ser Cys Phe Ala Arg Ser | | |
| 1220 | 1225 | 1230 |
| Ser Arg Ser Ala Ile Arg His Ser Pro Ser Lys Cys Arg Leu His Pro | | |
| 1235 | 1240 | 1245 |
| Ser Glu Ser Ser Trp Gly Gly Glu Glu Arg Ala Leu Pro Pro Ser Glu | | |
| 1250 | 1255 | 1260 |

<210> 585

<211> 633

<212> PRT

<213> Homo sapiens

<400> 585

| | | |
|---|-----|-----|
| Met Glu Ser Gly Pro Lys Met Leu Ala Pro Val Cys Leu Val Glu Asn | | |
| 1 | 5 | 10 |
| Asn Asn Glu Gln Leu Leu Val Asn Gln Gln Ala Ile Gln Ile Leu Glu | | |
| 20 | 25 | 30 |
| Lys Ile Ser Gln Pro Val Val Val Val Ala Ile Val Gly Leu Tyr Arg | | |
| 35 | 40 | 45 |
| Thr Gly Lys Ser Tyr Leu Met Asn His Leu Ala Gly Gln Asn His Gly | | |
| 50 | 55 | 60 |
| Phe Pro Leu Gly Ser Thr Val Gln Ser Glu Thr Lys Gly Ile Trp Met | | |
| 65 | 70 | 75 |
| Trp Cys Val Pro His Pro Ser Lys Pro Asn His Thr Leu Val Leu Leu | | |
| 85 | 90 | 95 |
| Asp Thr Glu Gly Leu Gly Asp Val Glu Lys Gly Asp Pro Lys Asn Asp | | |
| 100 | 105 | 110 |

Ser Trp Ile Phe Ala Leu Ala Val Leu Leu Cys Ser Thr Phe Val Tyr
115 120 125
Asn Ser Met Ser Thr Ile Asn His Gln Ala Leu Glu Gln Leu His Tyr
130 135 140
Val Thr Glu Leu Thr Glu Leu Ile Lys Ala Lys Ser Ser Pro Arg Pro
145 150 155 160
Asp Gly Val Glu Asp Ser Thr Glu Phe Val Ser Phe Phe Pro Asp Phe
165 170 175
Leu Trp Thr Val Arg Asp Phe Thr Leu Glu Leu Lys Leu Asn Gly His
180 185 190
Pro Ile Thr Glu Asp Glu Tyr Leu Glu Asn Ala Leu Lys Leu Ile Gln
195 200 205
Gly Asn Asn Pro Arg Val Gln Thr Ser Asn Phe Pro Arg Glu Cys Ile
210 215 220
Arg Arg Phe Phe Pro Lys Arg Lys Cys Phe Val Phe Asp Arg Pro Thr
225 230 235 240
Asn Asp Lys Asp Leu Leu Ala Asn Ile Glu Lys Val Ser Glu Lys Gln
245 250 255
Leu Asp Pro Lys Phe Gln Glu Gln Thr Asn Ile Phe Cys Ser Tyr Ile
260 265 270
Phe Thr His Ala Arg Thr Lys Thr Leu Arg Glu Gly Ile Thr Val Thr
275 280 285
Gly Asn Arg Leu Gly Thr Leu Ala Val Thr Tyr Val Glu Ala Ile Asn
290 295 300
Ser Gly Ala Val Pro Cys Leu Glu Asn Ala Val Ile Thr Leu Ala Gln
305 310 315 320
Arg Glu Asn Ser Ala Ala Val Gln Arg Ala Ala Asp Tyr Tyr Ser Gln
325 330 335
Gln Met Ala Gln Arg Val Lys Leu Pro Thr Asp Thr Leu Gln Glu Leu

340 345 350
Leu Asp Met His Ala Ala Cys Glu Arg Glu Ala Ile Ala Ile Phe Met
355 360 365
Glu His Ser Phe Lys Asp Glu Asn Gln Glu Phe Gln Lys Lys Phe Met
370 375 380
Glu Thr Thr Met Asn Lys Lys Gly Asp Phe Leu Leu Gln Asn Glu Glu
385 390 395 400
Ser Ser Val Gln Tyr Cys Gln Ala Lys Leu Asn Glu Leu Ser Lys Gly
405 410 415
Leu Met Glu Ser Ile Ser Ala Gly Ser Phe Ser Val Pro Gly Gly His
420 425 430
Lys Leu Tyr Met Glu Thr Lys Glu Arg Ile Glu Gln Asp Tyr Trp Gln
435 440 445
Val Pro Arg Lys Gly Val Lys Ala Lys Glu Val Phe Gln Arg Phe Leu
450 455 460
Glu Ser Gln Met Val Ile Glu Glu Ser Ile Leu Gln Ser Asp Lys Ala
465 470 475 480
Leu Thr Asp Arg Glu Lys Ala Val Ala Val Asp Arg Ala Lys Lys Glu
485 490 495
Ala Ala Glu Lys Glu Gln Glu Leu Leu Lys Gln Lys Leu Gln Glu Gln
500 505 510
Gln Gln Gln Met Glu Ala Gln Asp Lys Ser Arg Lys Glu Asn Ile Ala
515 520 525
Gln Leu Lys Glu Lys Leu Gln Met Glu Arg Glu His Leu Leu Arg Glu
530 535 540
Gln Ile Met Met Leu Glu His Thr Gln Lys Val Gln Asn Asp Trp Leu
545 550 555 560
His Glu Gly Phe Lys Lys Lys Tyr Glu Glu Met Asn Ala Glu Ile Ser
565 570 575

Gln Phe Lys Arg Met Ile Asp Thr Thr Lys Asn Asp Asp Thr Pro Trp
 580 585 590
 Ile Ala Arg Thr Leu Asp Asn Leu Ala Asp Glu Leu Thr Ala Ile Leu
 595 600 605
 Ser Ala Pro Ala Lys Leu Ile Gly His Gly Val Lys Gly Val Ser Ser
 610 615 620
 Leu Phe Lys Lys His Lys Leu Pro Phe
 625 630

<210> 586

<211> 779

<212> PRT

<213> Homo sapiens

<400> 586

Met Leu Pro Cys His Ser Pro Ser Arg Ser Asp Gln Val Asn Leu Gly
 1 5 10 15
 Pro Ser Ile Asn Ser Lys Leu Leu Gly Met Ser Thr Gln Asn Tyr Ala
 20 25 30
 Leu Met Gln Val Ala Gly Gln Glu Gly Thr Phe Ser Leu Val Ala Leu
 35 40 45
 Pro His Val Ala Ser Ala Gln Pro Ile Gln Lys Pro Arg Met Ser Leu
 50 55 60
 Pro Glu Asn Leu Lys Leu Pro Ile Pro Arg Tyr Gln Pro Pro Arg Asn
 65 70 75 80
 Ser Lys Ala Ser Arg Lys Lys Pro Ile Leu Ile Phe Pro Lys Ser Gly
 85 90 95
 Cys Ser Lys Ala Pro Ala Gln Thr Gln Met Cys Pro Gln Met Ser Pro

| | | |
|---|-----|-----|
| 100 | 105 | 110 |
| Ser Pro Pro His His Pro Glu Leu Leu Tyr Lys Pro Ser Pro Phe Glu | | |
| 115 | 120 | 125 |
| Glu Val Pro Ser Leu Glu Gln Ala Pro Ala Ser Ile Ser Thr Ala Ala | | |
| 130 | 135 | 140 |
| Leu Thr Asn Gly Ser Asp His Gly Asp Leu Arg Pro Pro Val Thr Asn | | |
| 145 | 150 | 155 |
| Thr His Gly Ser Leu Asn Pro Pro Ala Thr Pro Ala Ser Ser Thr Pro | | |
| 165 | 170 | 175 |
| Glu Glu Pro Ala Lys Gln Asp Leu Thr Ala Leu Ser Gly Lys Ala His | | |
| 180 | 185 | 190 |
| Phe Val Ser Lys Ile Thr Ser Ser Lys Pro Ser Ala Val Ala Ser Glu | | |
| 195 | 200 | 205 |
| Lys Phe Lys Glu Gln Val Asp Leu Ala Lys Thr Met Thr Asn Leu Ser | | |
| 210 | 215 | 220 |
| Pro Thr Ile Leu Gly Asn Ala Val Gln Leu Ile Ser Ser Val Pro Lys | | |
| 225 | 230 | 235 |
| Gly Lys Leu Pro Ile Pro Pro Tyr Ser Arg Met Lys Thr Met Glu Val | | |
| 245 | 250 | 255 |
| Tyr Lys Ile Lys Ser Asp Ala Asn Ile Ala Gly Phe Ser Leu Pro Gly | | |
| 260 | 265 | 270 |
| Pro Lys Ala Asp Cys Asp Lys Ile Pro Ser Thr Thr Glu Gly Phe Asn | | |
| 275 | 280 | 285 |
| Ala Ala Thr Lys Val Ala Ser Arg Leu Pro Val Pro Gln Val Ser Gln | | |
| 290 | 295 | 300 |
| Gln Ser Ala Cys Glu Ser Ala Phe Cys Pro Pro Thr Lys Leu Asp Leu | | |
| 305 | 310 | 315 |
| Asn His Lys Thr Lys Leu Asn Ser Gly Ala Ala Lys Arg Lys Gly Arg | | |
| 325 | 330 | 335 |

Lys Arg Lys Val Pro Asp Glu Ile Leu Ala Phe Gln Gly Lys Arg Arg
340 345 350
Lys Tyr Ile Ile Asn Lys Cys Arg Asp Gly Lys Glu Arg Val Lys Asn
355 360 365
Asp Pro Gln Glu Phe Arg Asp Gln Lys Leu Gly Thr Leu Lys Lys Tyr
370 375 380
Arg Ser Ile Met Pro Lys Pro Ile Met Val Ile Pro Thr Leu Ala Ser
385 390 395 400
Leu Ala Ser Pro Thr Thr Leu Gln Ser Gln Met Leu Gly Gly Leu Gly
405 410 415
Gln Asp Val Leu Leu Asn Asn Ser Leu Thr Pro Lys Tyr Leu Gly Cys
420 425 430
Lys Gln Asp Asn Ser Ser Ser Pro Lys Pro Ser Ser Val Phe Arg Asn
435 440 445
Gly Phe Ser Gly Ile Lys Lys Pro Trp His Arg Cys His Val Cys Asn
450 455 460
His His Phe Gln Phe Lys Gln His Leu Arg Asp His Met Asn Thr His
465 470 475 480
Thr Asn Arg Arg Pro Tyr Ser Cys Arg Ile Cys Arg Lys Ser Tyr Val
485 490 495
Arg Pro Gly Ser Leu Ser Thr His Met Lys Leu His His Gly Glu Asn
500 505 510
Arg Leu Lys Lys Leu Met Cys Cys Glu Phe Cys Ala Lys Val Phe Gly
515 520 525
His Ile Arg Val Tyr Phe Gly His Leu Lys Glu Val His Arg Val Val
530 535 540
Ile Ser Thr Glu Pro Ala Pro Ser Glu Leu Gln Pro Gly Asp Ile Pro
545 550 555 560
Lys Asn Arg Asp Met Ser Val Arg Gly Met Glu Gly Ser Leu Glu Arg

565 570 575
Glu Asn Lys Ser Asn Leu Glu Glu Asp Phe Leu Leu Asn Gln Ala Asp
580 585 590
Glu Val Lys Leu Gln Ile Lys Cys Gly Arg Cys Gln Ile Thr Ala Gln
595 600 605
Ser Phe Ala Glu Ile Lys Phe His Leu Leu Gly Val His Gly Glu Glu
610 615 620
Ile Glu Gly Arg Leu Gln Glu Gly Thr Phe Pro Gly Ser Lys Gly Thr
625 630 635 640
Gln Glu Glu Leu Val Gln His Ala Ser Pro Asp Trp Lys Arg His Pro
645 650 655
Glu Arg Gly Lys Pro Glu Lys Val His Ser Ser Ser Glu Glu Ser His
660 665 670
Ala Cys Pro Arg Leu Lys Arg Gln Leu His Leu His Gln Asn Gly Val
675 680 685
Glu Met Leu Met Glu Asn Glu Gly Pro Gln Ser Gly Thr Asn Lys Pro
690 695 700
Arg Glu Thr Cys Gln Gly Pro Glu Cys Pro Gly Leu His Thr Phe Leu
705 710 715 720
Leu Trp Ser His Ser Gly Phe Asn Cys Leu Leu Cys Ala Glu Met Leu
725 730 735
Gly Arg Lys Glu Asp Leu Leu His His Trp Lys His Gln His Asn Cys
740 745 750
Glu Asp Pro Ser Lys Leu Trp Ala Ile Leu Asn Thr Val Ser Asn Gln
755 760 765
Gly Val Ile Glu Leu Ser Ser Glu Ala Glu Lys
770 775

<210> 587

<211> 353

<212> PRT

<213> Homo sapiens

<400> 587

Met Glu Phe Arg Lys Thr Met Asp Ile Asp His Thr Leu Asp Trp Gln

1 5 10 15

Pro Pro Glu Val Ile Gln Lys Tyr Met Pro Gly Gly Leu Cys Gly Tyr

20 25 30

Asp Arg Asp Gly Cys Pro Val Trp Tyr Asp Ile Thr Gly Pro Leu Asp

35 40 45

Pro Lys Gly Leu Leu Phe Ser Val Thr Lys Gln Asp Leu Leu Lys Thr

50 55 60

Lys Met Arg Asp Cys Glu Arg Ile Leu His Glu Cys Asp Leu Gln Thr

65 70 75 80

Glu Arg Leu Gly Lys Lys Ile Glu Thr Ile Val Met Ile Phe Asp Cys

85 90 95

Glu Gly Leu Gly Leu Lys His Phe Trp Lys Pro Leu Val Glu Val Tyr

100 105 110

Gln Glu Phe Phe Gly Leu Leu Glu Glu Asn Tyr Pro Glu Thr Leu Lys

115 120 125

Phe Met Leu Ile Val Lys Ala Thr Lys Leu Phe Pro Val Gly Tyr Asn

130 135 140

Leu Met Lys Pro Phe Leu Ser Glu Asp Thr Arg Arg Lys Ile Ile Val

145 150 155 160

Leu Gly Asn Asn Trp Lys Glu Gly Leu Leu Lys Leu Ile Ser Pro Glu

165 170 175

Glu Leu Pro Ala Gln Phe Gly Gly Thr Leu Thr Asp Pro Asp Gly Asn

| | | |
|---|-----|-----|
| 180 | 185 | 190 |
| Pro Lys Cys Leu Thr Lys Ile Asn Tyr Gly Gly Glu Ile Pro Lys Ser | | |
| 195 | 200 | 205 |
| Met Tyr Val Arg Asp Gln Val Lys Thr Gln Tyr Glu His Ser Val Gln | | |
| 210 | 215 | 220 |
| Ile Asn Arg Gly Ser Ser His Gln Val Glu Tyr Glu Ile Leu Phe Pro | | |
| 225 | 230 | 235 |
| Gly Cys Val Leu Arg Trp Gln Phe Ser Ser Asp Gly Ala Asp Ile Gly | | |
| 245 | 250 | 255 |
| Phe Gly Val Phe Leu Lys Thr Lys Met Gly Glu Arg Gln Arg Ala Gly | | |
| 260 | 265 | 270 |
| Glu Met Thr Glu Val Leu Pro Ser Gln Arg Tyr Asn Ala His Met Val | | |
| 275 | 280 | 285 |
| Pro Glu Asp Gly Asn Leu Thr Cys Ser Glu Ala Gly Val Tyr Val Glu | | |
| 290 | 295 | 300 |
| Ser Glu Ser Gly Lys Ser Cys Cys His Leu Pro Val Ile Ile Cys Ser | | |
| 305 | 310 | 315 |
| His Glu Leu Gln Asn Ser His Ser Asn Ser Gln Val Met Ala Tyr Gln | | |
| 325 | 330 | 335 |
| Met Val Arg Lys Cys Lys Leu Ser Arg Pro Leu Pro Leu Pro Ala Ser | | |
| 340 | 345 | 350 |

Asn

<210> 588

<211> 606

<212> PRT

<213> Homo sapiens

<400> 588

Met Cys Leu Glu Lys Arg Tyr Leu Asp Val Leu Ser Asp Val Thr Gly
1 5 10 15
Pro Gln Val Ser Cys Tyr Ile Thr Ala Pro Ser Tyr Val Leu Gln Gln
20 25 30
Leu Glu Cys Arg Ile Ile Asn His Met Ser Ser Leu Ile Val Gly Asp
35 40 45
Asn Glu Glu Leu Val Ser Asn Val Ile Thr Ile Glu Cys Ser Asp Lys
50 55 60
Glu Lys Arg Val Pro Phe Pro Ile Gly Ile Ala Ile Pro Phe Thr Ala
65 70 75 80
Arg Tyr Arg Gly Asn Tyr Arg Asp Ile Met Val Lys Val Cys Asp Ile
85 90 95
Asn Leu Gln Ser Ser Tyr Leu Asn Pro Asn Ser Leu Glu Gly Met Lys
100 105 110
Gly Gly Tyr Lys Gly Thr Cys Ala Ser Val Lys Val Tyr Lys Leu Gly
115 120 125
Ile Phe Ser Val Val Ser Cys Leu Lys Lys Glu Ser Phe Thr Val Thr
130 135 140
Lys Lys Gly Leu Ala Leu Lys Ser Ser Met Asp Ser Arg Ile Ser Leu
145 150 155 160
Asn Tyr Pro Pro Gly Val Phe Thr Ser Pro Val Leu Val Gln Leu Lys
165 170 175
Ile Gln Pro Val Asp Pro Ala Leu Val Ala His Leu Lys Ala Gln Gln
180 185 190
Asp Thr Phe Tyr Ser Val Gln Ser Thr Ser Pro Leu Ile His Ile Gln
195 200 205
His Pro Ser Thr Tyr Pro Phe Gln Lys Pro Val Thr Leu Phe Leu Pro

| | | |
|---|-----|-----|
| 210 | 215 | 220 |
| Cys Ser Pro Tyr Leu Asp Lys Asn Asn Leu Gly Ser Glu Ile Asp His | | |
| 225 | 230 | 235 |
| Lys Arg Arg Ala Ser Ala Thr Ile Asn Arg Ile Thr Pro Ser Tyr Phe | | |
| 245 | 250 | 255 |
| Asn Arg Thr Lys Ile Ala Ser Ile Arg Lys Pro Arg Lys Asn Ala Ser | | |
| 260 | 265 | 270 |
| Glu Cys Leu Lys Leu Leu Gly Phe Arg Ser Gln Asp Ser Gly Trp Cys | | |
| 275 | 280 | 285 |
| Gly Leu Asp Asp Val Val Lys Thr Ile Gln Ser Gly Leu Val Ser Val | | |
| 290 | 295 | 300 |
| Glu Leu Tyr Glu His Leu Glu Arg Phe Ile Val Leu His Leu Ser Ser | | |
| 305 | 310 | 315 |
| Thr Met Asp Asn Ser His Leu Val Thr Phe Val Lys Ser Leu Glu Glu | | |
| 325 | 330 | 335 |
| Ala Met Leu Ser Thr Thr Ala Cys Ile Val Leu Ser His Gln Lys Asp | | |
| 340 | 345 | 350 |
| Asn Pro His Arg Ile Ala Val Leu Val Val Pro Ser Lys Asp Leu Ser | | |
| 355 | 360 | 365 |
| Gln Val Leu Lys Asp Leu His Leu Glu Gly Phe Gly Gly Pro Pro Glu | | |
| 370 | 375 | 380 |
| Pro Ser Arg His Phe Gln Val Arg Glu Gly Glu Gln Leu Leu Leu Arg | | |
| 385 | 390 | 395 |
| Phe Thr Gly Asn Ile Phe Ala Ser Ser Asn Gly Lys Asp Tyr Gly Lys | | |
| 405 | 410 | 415 |
| Asp Tyr Thr Leu Ile Phe His Leu Gln Arg Lys Pro Arg Leu Glu Leu | | |
| 420 | 425 | 430 |
| Gln Ile Lys Glu Val Asp Glu Phe Gly Asn Tyr Ser Cys Pro His Tyr | | |
| 435 | 440 | 445 |

Lys Gly Thr Ile Val Val Tyr Lys Val Pro Lys Gly Lys Ile Val Pro

450

455

460

Asn Leu Asn Gln Ser Leu Val Ile Asn Glu Asn His Ser Gln Leu Pro

465

470

475

480

Ile Cys Lys Leu Pro Leu Lys Leu Pro Lys His Lys Lys Leu Ile Asn

485

490

495

His Pro Gln Ser Thr Lys Arg Val Ser Lys Asp Pro Val Glu Ala Leu

500

505

510

Trp Asp Asn Leu Leu His Trp Leu Ala Glu Glu Leu Ser Glu Glu Asn

515

520

525

Ala Glu Ser Leu Ser Ser Thr Leu Pro Leu Arg Arg Ser Thr Ile Gln

530

535

540

Leu Ile Lys Leu Lys Asn Pro Asp Asp Leu Thr Glu Gln Ile His Glu

545

550

555

560

Phe Leu Cys Phe Trp Lys Lys Ser Leu Pro Thr Phe Thr Asp Lys Leu

565

570

575

Arg Leu Leu Ala Arg His Leu Arg Lys Ile Gly Arg Ser Asp Leu Ala

580

585

590

Glu Glu Leu Lys Phe Lys Trp Glu Asn Lys Val Phe Thr Glu

595

600

605

<210> 589

<211> 151

<212> PRT

<213> Homo sapiens

<400> 589

Met Ala Thr Ile Thr Met Gln Ala Tyr Ser Arg Gly Phe Leu Ala Arg

| | | | |
|---|-----|-----|----|
| 1 | 5 | 10 | 15 |
| Arg Arg Tyr Arg Lys Met Leu Glu Glu His Lys Ala Val Ile Leu Gln | | | |
| 20 | 25 | 30 | |
| Lys Tyr Ala Arg Ala Trp Leu Ala Arg Arg Arg Phe Gln Ser Ile Arg | | | |
| 35 | 40 | 45 | |
| Arg Phe Val Leu Asn Ile Gln Leu Thr Tyr Arg Val Gln Arg Leu Gln | | | |
| 50 | 55 | 60 | |
| Lys Lys Leu Glu Asp Gln Asn Lys Glu Asn His Gly Leu Val Glu Lys | | | |
| 65 | 70 | 75 | 80 |
| Leu Thr Ser Leu Ala Ala Leu Arg Ala Gly Asp Val Glu Lys Ile Gln | | | |
| 85 | 90 | 95 | |
| Lys Leu Glu Ala Glu Leu Glu Lys Ala Ala Thr His Arg Arg Asn Tyr | | | |
| 100 | 105 | 110 | |
| Glu Glu Lys Gly Lys Arg Tyr Arg Asp Ala Val Glu Glu Val Ser Cys | | | |
| 115 | 120 | 125 | |
| Gly Arg Val Arg Arg Asp Gly Asn Met Arg Thr Leu Cys Glu Lys Asp | | | |
| 130 | 135 | 140 | |
| Glu Arg Cys Gln Leu Phe Leu | | | |
| 145 | 150 | | |

<210> 590

<211> 731

<212> PRT

<213> Homo sapiens

<400> 590

Met Met Gln Ala Gln Glu Ser Leu Thr Leu Glu Asp Val Ala Val Asp

| | | | |
|---|---|----|----|
| 1 | 5 | 10 | 15 |
|---|---|----|----|

Phe Thr Trp Glu Glu Trp Gln Phe Leu Ser Pro Ala Gln Lys Asp Leu
 20 25 30
 Tyr Arg Asp Val Met Leu Glu Asn Tyr Ser Asn Leu Val Ala Val Gly
 35 40 45
 Tyr Gln Ala Ser Lys Pro Asp Ala Leu Ser Lys Leu Glu Arg Gly Glu
 50 55 60
 Glu Thr Cys Thr Thr Glu Asp Glu Ile Tyr Ser Arg Ile Cys Ser Glu
 65 70 75 80
 Ile Arg Lys Ile Asp Asp Pro Leu Gln His His Leu Gln Asn Gln Ser
 85 90 95
 Ile Gln Lys Ser Val Lys Gln Cys His Glu Gln Asn Met Phe Gly Asn
 100 105 110
 Ile Val Asn Gln Asn Lys Gly His Phe Leu Leu Lys Gln Asp Cys Asp
 115 120 125
 Thr Phe Asp Leu His Glu Lys Pro Leu Lys Ser Asn Leu Ser Phe Glu
 130 135 140
 Asn Gln Lys Arg Ser Ser Gly Leu Lys Asn Ser Ala Glu Phe Asn Arg
 145 150 155 160
 Asp Gly Lys Ser Leu Phe His Ala Asn His Lys Gln Phe Tyr Thr Glu
 165 170 175
 Met Lys Phe Pro Ala Ile Ala Lys Pro Ile Asn Lys Ser Gln Phe Ile
 180 185 190
 Lys Gln Gln Arg Thr His Asn Ile Glu Asn Ala His Val Cys Ser Glu
 195 200 205
 Cys Gly Lys Ala Phe Leu Lys Leu Ser Gln Phe Ile Asp His Gln Arg
 210 215 220
 Val His Thr Gly Glu Lys Pro His Val Cys Ser Met Cys Gly Lys Ala
 225 230 235 240
 Phe Ser Arg Lys Ser Arg Leu Met Asp His Gln Arg Thr His Thr Glu

| | | |
|---|-----|-----|
| 245 | 250 | 255 |
| Leu Lys His Tyr Glu Cys Thr Glu Cys Asp Lys Thr Phe Leu Lys Lys | | |
| 260 | 265 | 270 |
| Ser Gln Leu Asn Ile His Gln Lys Thr His Met Gly Gly Lys Pro Tyr | | |
| 275 | 280 | 285 |
| Thr Cys Ser Gln Cys Gly Lys Ala Phe Ile Lys Lys Cys Arg Leu Ile | | |
| 290 | 295 | 300 |
| Tyr His Gln Arg Thr His Thr Gly Glu Lys Pro His Gly Cys Ser Val | | |
| 305 | 310 | 315 |
| Cys Gly Lys Ala Phe Ser Thr Lys Phe Ser Leu Thr Thr His Gln Lys | | |
| 325 | 330 | 335 |
| Thr His Thr Gly Glu Lys Pro Tyr Ile Cys Ser Glu Cys Gly Lys Gly | | |
| 340 | 345 | 350 |
| Phe Ile Glu Lys Arg Arg Leu Thr Ala His His Arg Thr His Thr Gly | | |
| 355 | 360 | 365 |
| Glu Lys Pro Phe Ile Cys Asn Lys Cys Gly Lys Gly Phe Thr Leu Lys | | |
| 370 | 375 | 380 |
| Asn Ser Leu Ile Thr His Gln Gln Thr His Thr Gly Glu Lys Leu Tyr | | |
| 385 | 390 | 395 |
| Thr Cys Ser Glu Cys Gly Lys Gly Phe Ser Met Lys His Cys Leu Met | | |
| 405 | 410 | 415 |
| Val His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu | | |
| 420 | 425 | 430 |
| Cys Gly Lys Gly Phe Ala Leu Lys Ser Pro Leu Ile Arg His Gln Arg | | |
| 435 | 440 | 445 |
| Thr His Thr Gly Glu Lys Pro Tyr Val Cys Thr Glu Cys Arg Lys Gly | | |
| 450 | 455 | 460 |
| Phe Thr Met Lys Ser Asp Leu Ile Val His Gln Arg Thr His Thr Ala | | |
| 465 | 470 | 475 |
| | | 480 |

| | | | |
|---|-----|-----|-----|
| Glu Lys Pro Tyr Ile Cys Asn Asp Cys Gly Lys Gly Phe Thr Val Lys | | | |
| | 485 | 490 | 495 |
| Ser Arg Leu Ile Val His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr | | | |
| | 500 | 505 | 510 |
| Val Cys Gly Glu Cys Gly Lys Gly Phe Pro Ala Lys Ile Arg Leu Met | | | |
| | 515 | 520 | 525 |
| Gly His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Ile Cys Asn Glu | | | |
| | 530 | 535 | 540 |
| Cys Gly Lys Gly Phe Thr Glu Lys Ser His Leu Asn Val His Arg Arg | | | |
| 545 | 550 | 555 | 560 |
| Thr His Thr Gly Glu Lys Pro Tyr Val Cys Ser Glu Cys Gly Lys Asp | | | |
| | 565 | 570 | 575 |
| Leu Thr Gly Lys Ser Met Leu Ile Ala His Gln Arg Thr His Thr Gly | | | |
| | 580 | 585 | 590 |
| Glu Lys Pro Tyr Ile Cys Asn Glu Cys Gly Lys Gly Phe Thr Met Lys | | | |
| | 595 | 600 | 605 |
| Ser Thr Leu Ser Ile His Gln Gln Thr His Thr Gly Glu Lys Pro Tyr | | | |
| | 610 | 615 | 620 |
| Lys Cys Asn Glu Cys Asp Lys Thr Phe Arg Lys Lys Thr Cys Leu Ile | | | |
| 625 | 630 | 635 | 640 |
| Gln His Gln Arg Phe His Thr Gly Lys Thr Ser Phe Ala Cys Thr Glu | | | |
| | 645 | 650 | 655 |
| Cys Gly Lys Phe Ser Leu Arg Lys Asn Asp Leu Ile Thr His Gln Arg | | | |
| | 660 | 665 | 670 |
| Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Ser Asp Cys Gly Lys Ala | | | |
| | 675 | 680 | 685 |
| Phe Thr Thr Lys Ser Gly Leu Asn Val His Gln Arg Lys His Thr Gly | | | |
| | 690 | 695 | 700 |
| Glu Arg Pro Tyr Gly Cys Ser Asp Cys Gly Lys Ala Phe Ala His Leu | | | |

705 710 715 720
Ser Ile Leu Val Lys His Arg Arg Ile His Arg .
 725 730

<210> 591

<211> 1186

<212> PRT

<213> Homo sapiens

<400> 591

Met Tyr Gln Ala Leu Glu Gln Gly Gly Met Thr Phe Gly Trp Val Cys
1 5 10 15
Trp Met Ile Leu Phe Asp Ser Ser Leu Tyr Phe Leu Cys Gly Trp Tyr
 20 25 30
Leu Ser Asn Leu Ile Pro Gly Thr Phe Gly Leu Arg Lys Pro Trp Tyr
 35 40 45
Phe Pro Phe Thr Ala Ser Tyr Trp Lys Ser Val Gly Phe Leu Val Glu
 50 55 60
Lys Arg Gln Tyr Phe Leu Ser Ser Ser Leu Phe Phe Phe Asn Glu Asn
65 70 75 80
Phe Asp Asn Lys Gly Ser Ser Leu Gln Asn Arg Glu Gly Glu Leu Glu
 85 90 95
Gly Ser Ala Pro Gly Val Thr Leu Val Ser Val Thr Lys Glu Tyr Glu
 100 105 110
Gly His Lys Ala Val Val Gln Asp Leu Ser Leu Thr Phe Tyr Arg Asp
 115 120 125
Gln Ile Thr Ala Leu Leu Gly Thr Asn Gly Ala Gly Lys Thr Thr Ile
130 135 140

Ile Ser Met Leu Thr Gly Leu His Pro Pro Thr Ser Gly Thr Ile Ile
 145 150 155 160
 Ile Asn Gly Lys Asn Leu Gln Thr Asp Leu Ser Arg Val Arg Met Glu
 165 170 175
 Leu Gly Val Cys Pro Gln Gln Asp Ile Leu Leu Asp Asn Leu Thr Val
 180 185 190
 Arg Glu His Leu Leu Leu Phe Ala Ser Ile Lys Ala Pro Gln Trp Thr
 195 200 205
 Lys Lys Glu Leu His Gln Gln Val Asn Gln Thr Leu Gln Asp Val Asp
 210 215 220
 Leu Thr Gln His Gln His Lys Gln Thr Arg Ala Leu Ser Gly Gly Leu
 225 230 235 240
 Lys Arg Lys Leu Ser Leu Gly Ile Ala Phe Met Gly Met Ser Arg Thr
 245 250 255
 Val Val Leu Asp Glu Pro Thr Ser Gly Val Asp Pro Cys Ser Arg His
 260 265 270
 Ser Leu Trp Asp Ile Leu Leu Lys Tyr Arg Glu Gly Arg Thr Ile Ile
 275 280 285
 Phe Thr Thr His His Leu Asp Glu Ala Glu Ala Leu Ser Asp Arg Val
 290 295 300
 Ala Val Leu Gln His Gly Arg Leu Arg Cys Cys Gly Pro Pro Phe Cys
 305 310 315 320
 Leu Lys Glu Ala Tyr Gly Gln Gly Leu Arg Leu Thr Leu Thr Arg Gln
 325 330 335
 Pro Ser Val Leu Glu Ala His Asp Leu Lys Asp Met Ala Cys Val Thr
 340 345 350
 Ser Leu Ile Lys Ile Tyr Ile Pro Gln Ala Phe Leu Lys Asp Ser Ser
 355 360 365
 Gly Ser Glu Leu Thr Tyr Thr Ile Pro Lys Asp Thr Asp Lys Ala Cys

370 375 380
Leu Lys Gly Leu Phe Gln Ala Leu Asp Gly Asn Leu His Gln Leu His
385 390 395 400
Leu Thr Gly Tyr Gly Ile Ser Asp Thr Thr Leu Glu Glu Val Phe Leu
405 410 415
Met Leu Leu Gln Asp Ser Asn Lys Lys Ser His Ile Ala Leu Gly Thr
420 425 430
Glu Ser Glu Leu Gln Asn His Arg Pro Thr Gly His Leu Ser Gly Tyr
435 440 445
Cys Gly Ser Leu Ala Arg Pro Ala Thr Val Gln Gly Val Gln Leu Leu
450 455 460
Arg Ala Gln Val Ala Ala Ile Leu Ala Arg Arg Leu Arg Arg Thr Leu
465 470 475 480
Arg Ala Gly Lys Ser Thr Leu Ala Asp Leu Leu Leu Pro Val Leu Phe
485 490 495
Val Ala Leu Ala Met Gly Leu Phe Met Val Arg Pro Leu Ala Thr Glu
500 505 510
Tyr Pro Pro Leu Arg Leu Thr Pro Gly His Tyr Gln Arg Ala Glu Thr
515 520 525
Tyr Phe Phe Ser Ser Gly Gly Asp Asn Leu Asp Leu Thr Arg Val Leu
530 535 540
Leu Arg Lys Phe Arg Asp Gln Asp Leu Pro Cys Ala Asp Leu Asn Pro
545 550 555 560
Arg Gln Lys Asn Ser Ser Cys Trp Arg Thr Asp Pro Phe Ser His Pro
565 570 575
Glu Phe Gln Asp Ser Cys Gly Cys Leu Lys Arg Pro Asn Arg Ser Ala
580 585 590
Ser Ala Pro Tyr Leu Thr Asn His Leu Gly His Thr Leu Leu Asn Leu
595 600 605

Ser Gly Phe Asn Met Glu Glu Tyr Leu Leu Ala Pro Ser Glu Lys Pro
610 615 620
Arg Leu Gly Gly Trp Ser Phe Gly Leu Lys Ile Pro Ser Glu Ala Gly
625 630 635 640
Gly Ala Asn Gly Asn Ile Ser Lys Pro Pro Thr Leu Ala Lys Val Trp
645 650 655
Tyr Asn Gln Lys Gly Phe His Ser Leu Pro Ser Tyr Leu Asn His Leu
660 665 670
Asn Asn Leu Ile Leu Trp Gln His Leu Pro Pro Thr Val Asp Trp Arg
675 680 685
Gln Tyr Gly Ile Thr Leu Tyr Ser His Pro Tyr Gly Gly Ala Leu Leu
690 695 700
Asn Glu Asp Lys Ile Leu Glu Ser Ile Arg Gln Cys Gly Val Ala Leu
705 710 715 720
Cys Ile Val Leu Gly Phe Ser Ile Leu Ser Ala Ser Ile Gly Ser Ser
725 730 735
Val Val Arg Asp Arg Val Ile Gly Ala Lys Arg Leu Gln His Ile Ser
740 745 750
Gly Leu Gly Tyr Arg Met Tyr Trp Phe Thr Asn Phe Leu Tyr Asp Met
755 760 765
Leu Phe Tyr Leu Val Ser Val Cys Leu Cys Val Ala Val Ile Val Ala
770 775 780
Phe Gln Leu Thr Ala Phe Thr Phe Arg Lys Asn Leu Ala Ala Thr Ala
785 790 795 800
Leu Leu Leu Ser Leu Phe Gly Tyr Ala Thr Leu Pro Trp Met Tyr Leu
805 810 815
Met Ser Arg Ile Phe Ser Ser Ser Asp Val Ala Phe Ile Ser Tyr Val
820 825 830
Ser Leu Asn Phe Ile Phe Gly Leu Cys Thr Met Leu Ile Thr Ile Met

| | | |
|---|------|------|
| 835 | 840 | 845 |
| Pro Arg Leu Leu Ala Ile Ile Ser Lys Ala Lys Asn Leu Gln Asn Ile | | |
| 850 | 855 | 860 |
| Tyr Asp Val Leu Lys Trp Val Phe Thr Ile Phe Pro Gln Phe Cys Leu | | |
| 865 | 870 | 875 |
| Gly Gln Gly Leu Val Glu Leu Cys Tyr Asn Gln Thr Lys Tyr Asp Leu | | |
| 885 | 890 | 895 |
| Thr His Asn Phe Gly Ile Asp Ser Tyr Val Ser Pro Phe Glu Met Asn | | |
| 900 | 905 | 910 |
| Phe Leu Gly Trp Ile Phe Val Gln Leu Ala Ser Gln Gly Thr Val Leu | | |
| 915 | 920 | 925 |
| Leu Leu Leu Arg Val Leu Leu His Trp Asp Leu Leu Arg Trp Pro Arg | | |
| 930 | 935 | 940 |
| Gly His Ser Thr Leu Gln Gly Thr Val Lys Ser Ser Lys Asp Thr Asp | | |
| 945 | 950 | 955 |
| Val Glu Lys Glu Glu Lys Arg Val Phe Glu Gly Arg Thr Asn Gly Asp | | |
| 965 | 970 | 975 |
| Ile Leu Val Leu Tyr Asn Leu Ser Lys His Tyr Arg Arg Phe Phe Gln | | |
| 980 | 985 | 990 |
| Asn Ile Ile Ala Val Gln Asp Ile Ser Leu Gly Ile Pro Lys Gly Glu | | |
| 995 | 1000 | 1005 |
| Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly Lys Ser Thr Thr Phe | | |
| 1010 | 1015 | 1020 |
| Lys Met Leu Asn Gly Glu Val Ser Leu Thr Ser Gly His Ala Ile Ile | | |
| 1025 | 1030 | 1035 |
| Arg Thr Pro Met Gly Asp Ala Val Asp Leu Ser Ser Ala Gly Thr Ala | | |
| 1045 | 1050 | 1055 |
| Gly Val Leu Ile Gly Tyr Cys Pro Gln Gln Asp Ala Leu Asp Glu Leu | | |
| 1060 | 1065 | 1070 |

Leu Thr Gly Trp Glu His Leu Tyr Tyr Tyr Cys Ser Leu Arg Gly Ile

1075

1080

1085

Pro Arg Gln Cys Ile Pro Glu Val Ala Gly Asp Leu Ile Arg Arg Leu

1090

1095

1100

His Leu Glu Ala His Ala Asp Lys Pro Val Ala Thr Tyr Ser Gly Gly

1105

1110

1115

1120

Thr Lys Arg Lys Leu Ser Thr Ala Leu Ala Leu Val Gly Lys Pro Asp

1125

1130

1135

Ile Leu Leu Leu Asp Glu Pro Ser Ser Gly Met Asp Pro Cys Ser Lys

1140

1145

1150

Arg Tyr Leu Trp Gln Thr Ile Met Lys Glu Val Arg Glu Gly Cys Ala

1155

1160

1165

Ala Val Leu Thr Ser His Arg Phe Trp Tyr Gln Asp Asp Ala Gly Leu

1170

1175

1180

Ile Lys

1185

<210> 592

<211> 140

<212> PRT

<213> Homo sapiens

<400> 592

Met Tyr Ile Phe Phe Phe Phe Leu Lys Gln Met Ser Phe Asp Pro Asn

1

5

10

15

Leu Leu His Asn Asn Gly His Asn Gly Tyr Pro Asn Gly Thr Ser Ala

20

25

30

Ala Leu Arg Glu Thr Gly Val Ile Glu Lys Leu Leu Thr Ser Tyr Gly

35

40

45

Phe Ile Gln Cys Ser Glu Arg Gln Ala Arg Leu Phe Phe His Cys Ser
50 55 60
Gln Tyr Asn Gly Asn Leu Gln Asp Leu Lys Val Gly Gly Asn Leu Ser
65 70 75 80
Val Leu Leu Cys Lys Asn Val Ile Thr Lys Phe Val Leu His Ile Asn
85 90 95
Leu Phe Met Ser Val Phe Gln Lys Val Leu Cys Lys Leu Lys His Phe
100 105 110
Gly Leu Leu Val Val Leu Phe Ser Glu Glu Tyr Leu Tyr Lys Pro Ala
115 120 125
Glu Ser Leu Lys Asp Tyr Ile Cys Ile Tyr Leu Gln
130 135 140

<210> 593

<211> 177

<212> PRT

<213> Homo sapiens

<400> 593

Met Ser Ser Glu Thr Pro Thr Ser Arg Gln Leu Ser Glu Tyr Leu Lys
1 5 10 15
His Ala Lys Gly Arg Thr Arg Thr Ala Ile Arg Asn Gly Gln Val Trp
20 25 30
Glu Glu Ser Leu Lys Arg Leu Arg Gln Lys Ala Ser Leu Thr Asn Val
35 40 45
Thr Asp Pro Ser Leu Asp Leu Thr Ser Leu Ser Leu Glu Val Gly Cys
50 55 60
Gly Ala Pro Ala Pro Val Val Arg Cys Asp Pro Cys Ser Pro Tyr Arg

| | | | |
|---|-----|-----|-----|
| 65 | 70 | 75 | 80 |
| Thr Ile Thr Gly Asp Cys Asn Asn Arg Trp Arg Gly Leu Gly Cys Gly | | | |
| | 85 | 90 | 95 |
| Gly Arg Pro Phe Gln Pro Leu Arg Pro Ala Leu Pro Arg Pro Leu Ser | | | |
| 100 | 105 | 110 | |
| Leu Gly His Ser Arg Gln Ile Cys His Cys Leu Ala His Leu Gly Trp | | | |
| 115 | 120 | 125 | |
| Arg Ser His Leu Pro His Leu Leu Lys Ile Ala Arg Leu Gln Pro Ser | | | |
| 130 | 135 | 140 | |
| Pro Ser Ser Pro Leu Cys Val Ser Gly Ser Gly Thr Phe Pro Arg Gly | | | |
| 145 | 150 | 155 | 160 |
| Gly Gly Ala Pro Arg Leu Gln Gly Val Gly Ala Val Gln Arg Pro Gln | | | |
| 165 | 170 | 175 | |
| Ile | | | |

<210> 594

<211> 930

<212> PRT

<213> Homo sapiens

<400> 594

| | | | |
|---|----|----|----|
| Met Ala Gly Ala Ala Ala Val Ala Ala Gly Ala Ala Ala Gly Ala | | | |
| 1 | 5 | 10 | 15 |
| Ala Ala Ala Ala Val Ser Val Ala Ala Pro Gly Arg Ala Ser Ala Pro | | | |
| 20 | 25 | 30 | |
| Pro Pro Pro Pro Pro Val Tyr Cys Val Cys Arg Gln Pro Tyr Asp Val | | | |
| 35 | 40 | 45 | |

Asn Arg Phe Met Ile Glu Cys Asp Ile Cys Lys Asp Trp Phe His Gly
 50 55 60
 Ser Cys Val Gly Val Glu Glu His His Ala Val Asp Ile Asp Leu Tyr
 65 70 75 80
 His Cys Pro Asn Cys Ala Val Leu His Gly Ser Ser Leu Met Lys Lys
 85 90 95
 Arg Arg Asn Trp His Arg His Asp Tyr Thr Glu Ile Asp Asp Gly Ser
 100 105 110
 Lys Pro Val Gln Ala Gly Thr Arg Thr Phe Ile Lys Glu Leu Arg Ser
 115 120 125
 Arg Val Phe Pro Ser Ala Asp Glu Ile Ile Ile Lys Met His Gly Ser
 130 135 140
 Gln Leu Thr Gln Arg Tyr Leu Glu Lys His Gly Phe Asp Val Pro Ile
 145 150 155 160
 Met Val Pro Lys Leu Asp Asp Leu Gly Leu Arg Leu Pro Ser Pro Thr
 165 170 175
 Phe Ser Val Met Asp Val Glu Arg Tyr Val Gly Gly Asp Lys Val Ile
 180 185 190
 Asp Val Ile Asp Val Ala Arg Gln Ala Asp Ser Lys Met Thr Leu His
 195 200 205
 Asn Tyr Val Lys Tyr Phe Met Asn Pro Asn Arg Pro Lys Val Leu Asn
 210 215 220
 Val Ile Ser Leu Glu Phe Ser Asp Thr Lys Met Ser Glu Leu Val Glu
 225 230 235 240
 Val Pro Asp Ile Ala Lys Lys Leu Ser Trp Val Glu Asn Tyr Trp Pro
 245 250 255
 Asp Asp Ser Val Phe Pro Lys Pro Phe Val Gln Lys Tyr Cys Leu Met
 260 265 270
 Gly Val Gln Asp Ser Tyr Thr Asp Phe His Ile Asp Phe Gly Gly Thr

| | | |
|---|-----|-----|
| 275 | 280 | 285 |
| Ser Val Trp Tyr His Val Leu Trp Gly Glu Lys Ile Phe Tyr Leu Ile | | |
| 290 | 295 | 300 |
| Lys Pro Thr Asp Glu Asn Leu Ala Arg Tyr Glu Ser Trp Ser Ser Ser | | |
| 305 | 310 | 315 |
| Val Thr Gln Ser Glu Val Phe Phe Gly Asp Lys Val Asp Lys Cys Tyr | | |
| 325 | 330 | 335 |
| Lys Cys Val Val Lys Gln Gly His Thr Leu Phe Val Pro Thr Gly Trp | | |
| 340 | 345 | 350 |
| Ile His Ala Val Leu Thr Ser Gln Asp Cys Met Ala Phe Gly Gly Asn | | |
| 355 | 360 | 365 |
| Phe Leu His Asn Leu Asn Ile Gly Met Gln Leu Arg Cys Tyr Glu Met | | |
| 370 | 375 | 380 |
| Glu Lys Arg Leu Lys Thr Pro Asp Leu Phe Lys Phe Pro Phe Phe Glu | | |
| 385 | 390 | 395 |
| Ala Ile Cys Trp Phe Val Ala Lys Asn Leu Leu Glu Thr Leu Lys Glu | | |
| 405 | 410 | 415 |
| Leu Arg Glu Asp Gly Phe Gln Pro Gln Thr Tyr Leu Val Gln Gly Val | | |
| 420 | 425 | 430 |
| Lys Ala Leu His Thr Ala Leu Lys Leu Trp Met Lys Lys Glu Leu Val | | |
| 435 | 440 | 445 |
| Ser Glu His Ala Phe Glu Ile Pro Asp Asn Val Arg Pro Gly His Leu | | |
| 450 | 455 | 460 |
| Ile Lys Glu Leu Ser Lys Val Ile Arg Ala Ile Glu Glu Glu Asn Gly | | |
| 465 | 470 | 475 |
| Lys Pro Val Lys Ser Gln Gly Ile Pro Ile Val Cys Pro Val Ser Arg | | |
| 485 | 490 | 495 |
| Ser Ser Asn Glu Ala Thr Ser Pro Tyr His Ser Arg Arg Lys Met Arg | | |
| 500 | 505 | 510 |

Lys Leu Arg Asp His Asn Val Arg Thr Pro Ser Asn Leu Asp Ile Leu
 515 520 525
 Glu Leu His Thr Arg Glu Val Leu Lys Arg Leu Glu Met Cys Pro Trp
 530 535 540
 Glu Glu Asp Ile Leu Ser Ser Lys Leu Asn Gly Lys Phe Asn Lys His
 545 550 555 560
 Leu Gln Pro Ser Ser Thr Val Pro Glu Trp Arg Ala Lys Asp Asn Asp
 565 570 575
 Leu Arg Leu Leu Leu Thr Asn Gly Arg Ile Ile Lys Asp Glu Arg Gln
 580 585 590
 Pro Phe Ala Asp Gln Ser Leu Tyr Thr Ala Asp Ser Glu Asn Glu Glu
 595 600 605
 Asp Lys Arg Arg Thr Lys Lys Ala Lys Met Lys Ile Glu Glu Ser Ser
 610 615 620
 Gly Val Glu Gly Val Glu His Glu Glu Ser Gln Lys Pro Leu Asn Gly
 625 630 635 640
 Phe Phe Thr Arg Val Lys Ser Glu Leu Arg Ser Arg Ser Ser Gly Tyr
 645 650 655
 Ser Asp Ile Ser Glu Ser Glu Asp Ser Gly Pro Glu Cys Thr Ala Leu
 660 665 670
 Lys Ser Ile Phe Thr Thr Glu Glu Ser Glu Ser Ser Gly Asp Glu Lys
 675 680 685
 Lys Gln Glu Ile Thr Ser Asn Phe Lys Glu Glu Ser Asn Val Met Arg
 690 695 700
 Asn Phe Leu Gln Lys Ser Gln Lys Pro Ser Arg Ser Glu Ile Pro Ile
 705 710 715 720
 Lys Arg Glu Cys Pro Thr Ser Thr Ser Thr Glu Glu Glu Ala Ile Gln
 725 730 735
 Gly Met Leu Ser Met Ala Gly Leu His Tyr Ser Thr Cys Leu Gln Arg

| | | |
|---|-----|-----|
| 740 | 745 | 750 |
| Gln Ile Gln Ser Thr Asp Cys Ser Gly Glu Arg Asn Ser Leu Gln Asp | | |
| 755 | 760 | 765 |
| Pro Ser Ser Cys His Gly Ser Asn His Glu Val Arg Gln Leu Tyr Arg | | |
| 770 | 775 | 780 |
| Tyr Asp Lys Pro Val Glu Cys Gly Tyr His Val Lys Thr Glu Asp Pro | | |
| 785 | 790 | 795 |
| 800 | | |
| Asp Leu Arg Thr Ser Ser Trp Ile Lys Gln Phe Asp Thr Ser Arg Phe | | |
| 805 | 810 | 815 |
| His Pro Gln Asp Leu Ser Arg Ser Gln Lys Cys Ile Arg Lys Glu Gly | | |
| 820 | 825 | 830 |
| Ser Ser Glu Ile Ser Gln Arg Val Gln Ser Arg Asn Tyr Val Asp Ser | | |
| 835 | 840 | 845 |
| Ser Gly Ser Ser Leu Gln Asn Gly Lys Tyr Met Gln Asn Ser Asn Leu | | |
| 850 | 855 | 860 |
| Thr Ser Gly Ala Cys Gln Ile Ser Asn Gly Ser Leu Ser Pro Glu Arg | | |
| 865 | 870 | 875 |
| 880 | | |
| Pro Val Gly Glu Thr Ser Phe Ser Val Pro Leu His Pro Thr Lys Arg | | |
| 885 | 890 | 895 |
| Pro Ala Ser Asn Pro His Leu Ser Ala Thr Arg Gln Gln Lys Val Asn | | |
| 900 | 905 | 910 |
| Val Gln Lys Lys Glu Trp Gln Gln Pro Asn Asn Val Leu Gly Arg Ser | | |
| 915 | 920 | 925 |
| Leu Ser | | |
| 930 | | |

<210> 595

<211> 755

<212> PRT

<213> Homo sapiens

<400> 595

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Met Arg Lys Val Lys Lys Leu Arg Leu Asp Lys Glu Asn Thr Gly Ser
  1             5             10             15
Trp Arg Ser Phe Ser Leu Asn Ser Glu Gly Ala Glu Arg Met Ala Thr
      20             25             30
Ser Tyr Asp Phe His Ser Glu Ser Gly Leu Phe Leu Phe Gln Ala Ser
      35             40             45
Asn Ser Leu Phe His Cys Arg Asp Gly Gly Lys Asn Gly Phe Met Val
      50             55             60
Ser Pro Met Lys Pro Leu Glu Ile Lys Thr Gln Cys Ser Gly Pro Arg
      65             70             75             80
Met Asp Pro Lys Ile Cys Pro Ala Asp Pro Ala Phe Phe Ser Phe Ile
      85             90             95
Asn Asn Ser Asp Leu Trp Val Ala Asn Ile Glu Thr Gly Glu Glu Arg
      100            105            110
Arg Leu Thr Phe Cys His Gln Gly Leu Ser Asn Val Leu Asp Asp Pro
      115            120            125
Lys Ser Ala Gly Val Ala Thr Phe Val Ile Gln Glu Glu Phe Asp Arg
      130            135            140
Phe Thr Gly Tyr Trp Trp Cys Pro Thr Ala Ser Trp Glu Gly Ser Glu
      145            150            155            160
Gly Leu Lys Thr Leu Arg Ile Leu Tyr Glu Glu Val Asp Glu Ser Glu
      165            170            175
Val Glu Val Ile His Val Pro Ser Pro Ala Leu Glu Glu Arg Lys Thr
      180            185            190
Asp Ser Tyr Arg Tyr Pro Arg Thr Gly Ser Lys Asn Pro Lys Ile Ala

```

| | | |
|---|-----|-----|
| 195 | 200 | 205 |
| Leu Lys Leu Ala Glu Phe Gln Thr Asp Ser Gln Gly Lys Ile Val Ser | | |
| 210 | 215 | 220 |
| Thr Gln Glu Lys Glu Leu Val Gln Pro Phe Ser Ser Leu Phe Pro Lys | | |
| 225 | 230 | 235 |
| Val Glu Tyr Ile Ala Arg Ala Gly Trp Thr Arg Asp Gly Lys Tyr Ala | | |
| 245 | 250 | 255 |
| Trp Ala Met Phe Leu Asp Arg Pro Gln Gln Trp Leu Gln Leu Val Leu | | |
| 260 | 265 | 270 |
| Leu Pro Pro Ala Leu Phe Ile Pro Ser Thr Glu Asn Glu Glu Gln Arg | | |
| 275 | 280 | 285 |
| Leu Ala Ser Ala Arg Ala Val Pro Arg Asn Val Gln Pro Tyr Val Val | | |
| 290 | 295 | 300 |
| Tyr Glu Glu Val Thr Asn Val Trp Ile Asn Val His Asp Ile Phe Tyr | | |
| 305 | 310 | 315 |
| Pro Phe Pro Gln Ser Glu Gly Glu Asp Glu Leu Cys Phe Leu Arg Ala | | |
| 325 | 330 | 335 |
| Asn Glu Cys Lys Thr Gly Phe Cys His Leu Tyr Lys Val Thr Ala Val | | |
| 340 | 345 | 350 |
| Leu Lys Ser Gln Gly Tyr Asp Trp Ser Glu Pro Phe Ser Pro Gly Glu | | |
| 355 | 360 | 365 |
| Asp Glu Phe Lys Cys Pro Ile Lys Glu Glu Ile Ala Leu Thr Ser Gly | | |
| 370 | 375 | 380 |
| Glu Trp Glu Val Leu Ala Arg His Gly Ser Lys Ile Trp Val Asn Glu | | |
| 385 | 390 | 395 |
| Glu Thr Lys Leu Val Tyr Phe Gln Gly Thr Lys Asp Thr Pro Leu Glu | | |
| 405 | 410 | 415 |
| His His Leu Tyr Val Val Ser Tyr Glu Ala Ala Gly Glu Ile Val Arg | | |
| 420 | 425 | 430 |

Leu Thr Thr Pro Gly Phe Ser His Ser Cys Ser Met Ser Gln Asn Phe
435 440 445
Asp Met Phe Val Ser His Tyr Ser Ser Val Ser Thr Pro Pro Cys Val
450 455 460
His Val Tyr Lys Leu Ser Gly Pro Asp Asp Asp Pro Leu His Lys Gln
465 470 475 480
Pro Arg Phe Trp Ala Ser Met Met Glu Ala Ala Ser Cys Pro Pro Asp
485 490 495
Tyr Val Pro Pro Glu Ile Phe His Phe His Thr Arg Ser Asp Val Arg
500 505 510
Leu Tyr Gly Met Ile Tyr Lys Pro His Ala Leu Gln Pro Gly Lys Lys
515 520 525
His Pro Thr Val Leu Phe Val Tyr Gly Gly Pro Gln Val Gln Leu Val
530 535 540
Asn Asn Ser Phe Lys Gly Ile Lys Tyr Leu Arg Leu Asn Thr Leu Ala
545 550 555 560
Ser Leu Gly Tyr Ala Val Val Val Ile Asp Gly Arg Gly Ser Cys Gln
565 570 575
Arg Gly Leu Arg Phe Glu Gly Ala Leu Lys Asn Gln Met Gly Gln Val
580 585 590
Glu Ile Glu Asp Gln Val Glu Gly Pro Gln Phe Val Ala Glu Lys Tyr
595 600 605
Gly Phe Ile Asp Leu Ser Arg Val Ala Ile His Gly Trp Ser Tyr Gly
610 615 620
Gly Phe Leu Ser Leu Met Gly Leu Ile His Lys Pro Gln Val Phe Lys
625 630 635 640
Val Ala Ile Ala Gly Ala Pro Val Thr Val Trp Met Ala Tyr Asp Thr
645 650 655
Gly Tyr Thr Glu Arg Tyr Met Asp Val Pro Glu Asn Asn Gln His Gly

660 665 670
 Tyr Glu Ala Gly Ser Val Ala Leu His Val Glu Lys Leu Pro Asn Glu
 675 680 685
 Pro Asn Arg Leu Leu Ile Leu His Gly Phe Leu Asp Glu Asn Val His
 690 695 700
 Phe Phe His Thr Asn Phe Leu Val Ser Gln Leu Ile Arg Ala Gly Lys
 705 710 715 720
 Pro Tyr Gln Leu Gln Ile Tyr Pro Asn Glu Arg His Ser Ile Arg Cys
 725 730 735
 Pro Glu Ser Gly Glu His Tyr Glu Val Thr Leu Leu His Phe Leu Gln
 740 745 750
 Glu Tyr Leu
 755

<210> 596

<211> 268

<212> PRT

<213> Homo sapiens

<400> 596

Met Ala Ala Ala Ile Thr Asp Met Ala Asp Leu Glu Glu Leu Ser Arg
 1 5 10 15
 Leu Ser Pro Leu Pro Pro Gly Ser Pro Gly Ser Ala Ala Arg Gly Arg
 20 25 30
 Ala Glu Pro Pro Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu
 35 40 45
 Ala Glu Ala Glu Ala Val Ala Ala Leu Leu Leu Asn Gly Gly Ser Gly
 50 55 60

| | | | |
|---|-----|-----|-----|
| Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Val Gly Gly Gly Glu Ala Glu | | | |
| 65 | 70 | 75 | 80 |
| Thr Met Ser Glu Pro Ser Pro Glu Ser Ala Ser Gln Ala Gly Glu Asp | | | |
| | 85 | 90 | 95 |
| Glu Asp Glu Glu Glu Asp Asp Glu Glu Glu Glu Asp Glu Ser Ser Ser | | | |
| | 100 | 105 | 110 |
| Ser Gly Gly Gly Glu Glu Glu Ser Ser Ala Glu Ser Leu Val Gly Ser | | | |
| | 115 | 120 | 125 |
| Ser Gly Gly Ser Ser Ser Asp Glu Thr Arg Ser Leu Ser Pro Gly Ala | | | |
| | 130 | 135 | 140 |
| Ala Ser Ser Ser Ser Gly Asp Gly Asp Gly Lys Glu Gly Leu Glu Glu | | | |
| 145 | 150 | 155 | 160 |
| Pro Lys Gly Pro Arg Gly Ser Gln Gly Gly Gly Gly Gly Gly Ser Ser | | | |
| | 165 | 170 | 175 |
| Ser Ser Ser Val Val Ser Ser Gly Gly Asp Glu Gly Tyr Gly Thr Gly | | | |
| | 180 | 185 | 190 |
| Gly Gly Gly Ser Ser Ala Thr Ser Gly Gly Arg Arg Gly Ser Leu Glu | | | |
| | 195 | 200 | 205 |
| Met Ser Ser Asp Gly Glu Pro Leu Ser Arg Met Asp Ser Glu Asp Ser | | | |
| | 210 | 215 | 220 |
| Ile Ser Ser Thr Ile Met Asp Val Asp Ser Thr Ile Ser Ser Gly Arg | | | |
| 225 | 230 | 235 | 240 |
| Ser Thr Pro Ala Met Met Asn Gly Gln Gly Ser Thr Thr Ser Ser Ser | | | |
| | 245 | 250 | 255 |
| Lys Asn Ile Ala Tyr Asn Cys Cys Trp Asp Gln Cys | | | |
| | 260 | 265 | |

<210> 597

<211> 160

<212> PRT

<213> Homo sapiens

<400> 597

Met Leu Gly Glu Arg Pro Leu Cys Leu Thr Pro Gly Ala Lys Leu Gly

1 5 10 15

Leu His His Trp Ile Ile Arg Cys Phe Gln Arg Arg Pro Ser Pro His

20 25 30

Pro Asp Gln Gly Asn Trp Asp Asp Val Gly Pro Leu Thr Leu Ser Asp

35 40 45

Met Gln Pro Gly Trp Arg Leu Gly Gln Pro Pro Cys Arg Ser Glu Ser

50 55 60

Phe Ser Pro Cys His Leu Lys Ser Lys Ser Leu Leu Thr Gln Ala Leu

65 70 75 80

Pro Gly Met Cys Ser Pro Ala Thr Glu Pro Glu Ala Ala Leu Leu Leu

85 90 95

Ser Pro Val Gly Thr Ala Phe Gln Thr Gln Asn Thr Glu Phe Thr Ala

100 105 110

Ser Phe Gly Ile Phe Pro Asn Arg Leu Thr Val Pro Ile Ala Ser Asp

115 120 125

Pro Phe Gln Tyr Ser Cys Thr Arg Asn Val Met Val Lys Asn Lys Lys

130 135 140

Pro Pro Val Met Glu Gly Arg Asn Met Asn Gln Leu Lys Ala Phe His

145 150 155 160

<210> 598

<211> 411

<212> PRT

<213> Homo sapiens

<400> 598

```

Met Thr Glu Met Ser Glu Lys Glu Asn Glu Pro Asp Asp Ala Ala Thr
  1             5             10             15
His Ser Pro Pro Gly Thr Val Ser Ala Leu Gln Glu Thr Lys Leu Gln
          20             25             30
Arg Phe Lys Arg Ser Leu Ser Leu Lys Thr Ile Leu Arg Ser Lys Ser
          35             40             45
Leu Glu Asn Phe Phe Leu Arg Ser Gly Ser Glu Leu Lys Cys Pro Thr
          50             55             60
Glu Val Leu Leu Thr Pro Pro Thr Pro Leu Pro Pro Pro Ser Pro Pro
          65             70             75             80
Pro Thr Ala Ser Asp Arg Gly Leu Ala Thr Pro Ser Pro Ser Pro Cys
          85             90             95
Pro Val Pro Arg Pro Leu Ala Ala Leu Lys Pro Val Arg Leu His Ser
          100            105            110
Phe Gln Glu His Val Phe Lys Arg Ala Ser Pro Cys Glu Leu Cys His
          115            120            125
Gln Leu Ile Val Gly Asn Ser Lys Gln Gly Leu Arg Cys Lys Met Cys
          130            135            140
Lys Val Ser Val His Leu Trp Cys Ser Glu Glu Ile Ser His Gln Gln
          145            150            155            160
Cys Pro Gly Lys Thr Ser Thr Ser Phe Arg Arg Asn Phe Ser Ser Pro
          165            170            175
Leu Leu Val His Glu Pro Pro Pro Val Cys Ala Thr Ser Lys Glu Ser
          180            185            190
Pro Pro Thr Gly Asp Ser Gly Lys Val Asp Pro Val Tyr Glu Thr Leu

```

| | | |
|---|-----|-----|
| 195 | 200 | 205 |
| Arg Tyr Gly Thr Ser Leu Ala Leu Met Asn Arg Ser Ser Phe Ser Ser | | |
| 210 | 215 | 220 |
| Thr Ser Glu Ser Pro Thr Arg Ser Leu Ser Glu Arg Asp Glu Leu Thr | | |
| 225 | 230 | 235 |
| Glu Asp Gly Glu Gly Ser Ile Arg Ser Ser Glu Glu Gly Pro Gly Asp | | |
| 245 | 250 | 255 |
| Ser Ala Ser Pro Val Phe Thr Ala Pro Ala Glu Ser Glu Gly Pro Gly | | |
| 260 | 265 | 270 |
| Pro Glu Glu Lys Ser Pro Gly Gln Gln Leu Pro Lys Ala Thr Leu Arg | | |
| 275 | 280 | 285 |
| Lys Asp Val Gly Pro Met Tyr Ser Tyr Val Ala Leu Tyr Lys Phe Leu | | |
| 290 | 295 | 300 |
| Pro Gln Glu Asn Asn Asp Leu Ala Leu Gln Pro Gly Asp Arg Ile Met | | |
| 305 | 310 | 315 |
| Leu Val Asp Asp Ser Asn Glu Asp Trp Trp Lys Gly Lys Ile Gly Asp | | |
| 325 | 330 | 335 |
| Arg Val Gly Phe Phe Pro Ala Asn Phe Val Gln Arg Val Arg Pro Gly | | |
| 340 | 345 | 350 |
| Glu Asn Val Trp Arg Cys Cys Gln Pro Phe Ser Gly Asn Lys Glu Gln | | |
| 355 | 360 | 365 |
| Gly Tyr Met Ser Leu Lys Glu Asn Gln Ile Cys Val Gly Val Gly Arg | | |
| 370 | 375 | 380 |
| Ser Lys Asp Ala Asp Gly Phe Ile Arg Val Ser Ser Gly Lys Lys Arg | | |
| 385 | 390 | 395 |
| Gly Leu Val Pro Val Asp Ala Leu Thr Glu Ile | | |
| 405 | 410 | |

<210> 599

<211> 129

<212> PRT

<213> Homo sapiens

<400> 599

Met Leu Ser Ala Gly Gly Cys Ile Leu Leu Pro Val His Ile Val Cys

1 5 10 15

Ala Trp Asp Gly His Glu Ser Gly Gly Arg Ala Gly Val Leu Ala Leu

20 25 30

Gly Tyr Phe Gly Glu Thr Ile Arg Phe Lys Glu Gly Asn Thr Phe Ser

35 40 45

Gly Pro Val Pro Gln Asn Thr Thr Ile Thr Arg Gly Arg His Leu Ala

50 55 60

Glu Leu Ser Pro Thr Gly Thr Ser Gly Pro Trp Phe Leu His Pro Gln

65 70 75 80

Ser Ala Ser Phe His Ser Arg Gln Asn Gln Gly Ile Phe Gln Gly Gln

85 90 95

Val Ser His Pro Leu Gly Ala Gly Ile Leu Ser His Ser Lys Thr Asn

100 105 110

Phe Gln Val Pro Gly Leu Leu Gly Asn Pro Lys Arg Leu Ser Pro Ala

115 120 125

Glu

<210> 600

<211> 156

<212> PRT

<213> Homo sapiens

<400> 600

Met Gln Thr Glu Asp Ile Arg Leu Glu Pro Asp Leu Tyr Glu Ala Cys
1 5 10 15
Lys Ser Asp Ile Lys Asn Phe Cys Ser Ala Val Gln Tyr Gly Asn Ala
20 25 30
Gln Ile Ile Glu Cys Leu Lys Glu Asn Lys Lys Gln Leu Ser Thr Arg
35 40 45
Cys His Gln Lys Val Phe Lys Leu Gln Glu Thr Glu Met Met Asp Pro
50 55 60
Glu Leu Asp Tyr Thr Leu Met Arg Val Cys Lys Gln Met Ile Lys Arg
65 70 75 80
Phe Cys Pro Glu Ala Asp Ser Lys Thr Met Leu Gln Cys Leu Lys Gln
85 90 95
Asn Lys Asn Ser Glu Leu Met Asp Pro Lys Cys Lys Gln Met Ile Thr
100 105 110
Lys Arg Gln Ile Thr Gln Asn Thr Gly Lys Ile Leu Ala Trp Leu Ser
115 120 125
Trp Pro Arg Gly Val Ser Glu Lys Glu Phe Ser Gly Cys Arg Val Thr
130 135 140
Cys Ser Asn Ser Gln Gly Phe Val Ala Trp Glu Phe
145 150 155

<210> 601

<211> 183

<212> PRT

<213> Homo sapiens

<400> 601

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Leu | Ala | Ala | Leu | Gly | Leu | Ser | Pro | Cys | Pro | Arg | Leu | Leu | His |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Glu | Leu | Leu | Pro | Gly | Leu | Leu | Thr | Val | Phe | Ser | Leu | Arg | Phe | Leu |
| | | | | 20 | | | | 25 | | | | | 30 | | |
| Gln | Asp | Tyr | Gly | Gly | Tyr | Leu | Ser | Thr | Tyr | Ile | Leu | Pro | Ala | Lys | Gly |
| | | 35 | | | | | 40 | | | | | | 45 | | |
| Glu | Asn | Gln | Gly | Gln | Thr | Phe | Thr | Cys | Gly | Ser | Ala | Leu | Ser | Pro | Ile |
| | 50 | | | | | 55 | | | | | | 60 | | | |
| Thr | Asp | Phe | Lys | Leu | Tyr | Ala | Ser | Ala | Phe | Ser | Glu | Arg | Tyr | Leu | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | His | Gly | Thr | Arg | Asp | Asn | Ala | Val | Pro | Ala | Ala | Ala | Pro | Pro | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Ala | Arg | Glu | Thr | Gly | Thr | Pro | Arg | Pro | Leu | Pro | Gln | Gly | Thr | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Arg | Met | Val | Ala | Ala | Gly | Pro | Thr | Arg | Ala | His | Arg | Thr | Pro | Ala |
| | | 115 | | | | | | 120 | | | | | 125 | | |
| Pro | Arg | Phe | Gln | Pro | Pro | Ser | Gly | Ser | Met | Arg | Pro | Ala | His | Thr | Ser |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| Leu | Cys | Val | Pro | Val | Arg | Asp | Ile | Thr | Pro | Cys | Leu | Thr | Ser | Gln | Cys |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| His | Gly | Arg | Ser | Ser | Tyr | Ser | Thr | Ile | Val | Leu | Ala | Val | Arg | Val | His |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ile | Trp | Ala | Cys | Tyr | Phe | Leu | | | | | | | | | |
| | | | | 180 | | | | | | | | | | | |

<210> 602

<211> 579

<212> PRT

<213> Homo sapiens

<400> 602

Met Lys Asp Lys Ser Asn Gly Leu Glu Ser Gln Val Asn Gln Cys Asp

1 5 10 15

Lys Met Leu Gly Gly Asp Ala Leu Val Thr Asp Leu Leu Val Asp Phe

20 25 30

Cys Gly Ser Arg Ser Gly Val Glu Ile Pro Arg Thr Pro Gln Leu Tyr

35 40 45

Val Ala His Glu Ile Gly Thr Ile Lys Thr Val Thr Pro Pro Glu Asp

50 55 60

Arg Asp Ser Glu Ser Gly Val Val Gly Gly Gln Gly Thr Leu Gln Glu

65 70 75 80

Pro Gly Phe Gly Glu Ala Ser Glu Ala Ile Ser Val Ser Arg Asn Arg

85 90 95

Gln Pro Ile Pro Leu Leu Met Asn Lys Glu Asn Ser Thr Lys Thr Ser

100 105 110

Lys Val Glu Leu Thr Leu Ala Ser Pro Tyr Met Lys Gln Glu Lys Glu

115 120 125

Glu Glu Lys Glu Gly Phe Ser Glu Ser Asp Phe Ser Asp Gly Asn Thr

130 135 140

Ser Ser Asn Ala Glu Ser Trp Arg Asn Pro Ser Ser Ser Glu Glu Glu

145 150 155 160

Pro Ser Pro Val Leu Lys Thr Leu Glu Arg Ser Ala Ala Arg Lys Met

165 170 175

Pro Ser Lys Ser Leu Glu Asp Ile Ser Ser Asp Ser Ser Asn Gln Ala

180 185 190

Lys Val Asp Asn Gln Pro Glu Glu Leu Val Arg Ser Ala Glu Asp Asp
195 200 205

Glu Lys Pro Asp Gln Lys Pro Val Thr Asn Glu Cys Val Pro Arg Ile
210 215 220

Ser Thr Val Pro Thr Gln Pro Asp Asn Pro Phe Ser His Pro Asp Lys
225 230 235 240

Leu Lys Arg Met Ser Lys Ser Val Pro Ala Phe Leu Gln Asp Glu Val
245 250 255

Ser Gly Ser Val Met Ser Val Tyr Ser Gly Asp Phe Gly Asn Leu Glu
260 265 270

Val Lys Gly Asn Ile Gln Phe Ala Ile Glu Tyr Val Glu Ser Leu Lys
275 280 285

Glu Leu His Val Phe Val Ala Gln Cys Lys Asp Leu Ala Ala Val Asp
290 295 300

Val Lys Lys Gln Arg Ser Asp Pro Tyr Val Lys Ala Tyr Leu Leu Pro
305 310 315 320

Asp Lys Gly Lys Met Gly Lys Lys Lys Thr Leu Val Val Lys Lys Thr
325 330 335

Leu Asn Pro Val Tyr Asn Glu Ile Leu Arg Tyr Lys Ile Glu Lys Gln
340 345 350

Ile Leu Lys Thr Gln Lys Leu Asn Leu Ser Ile Trp His Arg Asp Thr
355 360 365

Phe Lys Arg Asn Ser Phe Leu Gly Glu Val Glu Leu Asp Leu Glu Thr
370 375 380

Trp Asp Trp Asp Asn Lys Gln Asn Lys Gln Leu Arg Trp Tyr Pro Leu
385 390 395 400

Lys Arg Lys Thr Ala Pro Val Ala Leu Glu Ala Glu Asn Arg Gly Glu
405 410 415

Met Lys Leu Ala Leu Gln Tyr Val Pro Glu Pro Val Pro Gly Lys Lys

420 425 430
Leu Pro Thr Thr Gly Glu Val His Ile Trp Val Lys Glu Cys Leu Asp
435 440 445
Leu Pro Leu Leu Arg Gly Ser His Leu Asn Ser Phe Val Lys Cys Thr
450 455 460
Ile Leu Pro Asp Thr Ser Arg Lys Ser Arg Gln Lys Thr Arg Ala Val
465 470 475 480
Gly Lys Thr Thr Asn Pro Ile Phe Asn His Thr Met Val Tyr Asp Gly
485 490 495
Phe Arg Pro Glu Asp Leu Met Glu Ala Cys Val Glu Leu Thr Val Trp
500 505 510
Asp His Tyr Lys Leu Thr Asn Gln Phe Leu Gly Gly Leu Arg Ile Gly
515 520 525
Phe Gly Thr Gly Lys Ser Tyr Gly Thr Glu Val Asp Trp Met Asp Ser
530 535 540
Thr Ser Glu Glu Val Ala Leu Trp Glu Lys Met Val Asn Ser Pro Asn
545 550 555 560
Thr Trp Ile Glu Ala Thr Leu Pro Leu Arg Met Leu Leu Ile Ala Lys
565 570 575
Ile Ser Lys

<210> 603

<211> 261

<212> PRT

<213> Homo sapiens

<400> 603

Met Arg Ser Leu Leu Leu Leu Ser Ala Phe Cys Leu Leu Glu Ala Ala
 1 5 10 15
 Leu Ala Ala Glu Val Lys Lys Pro Ala Ala Ala Ala Ala Pro Gly Thr
 20 25 30
 Ala Glu Lys Leu Ser Pro Lys Ala Ala Thr Leu Ala Glu Arg Ser Ala
 35 40 45
 Gly Leu Ala Phe Ser Leu Tyr Gln Ala Met Ala Lys Asp Gln Ala Val
 50 55 60
 Glu Asn Ile Leu Val Ser Pro Val Val Val Ala Ser Ser Leu Gly Leu
 65 70 75 80
 Val Ser Leu Gly Gly Lys Ala Thr Thr Ala Ser Gln Ala Lys Ala Val
 85 90 95
 Leu Ser Ala Glu Gln Leu Arg Asp Glu Glu Val His Ala Gly Leu Gly
 100 105 110
 Glu Leu Leu Arg Ser Leu Ser Asn Ser Thr Ala Arg Asn Val Thr Trp
 115 120 125
 Lys Leu Gly Ser Arg Leu Tyr Gly Pro Ser Ser Val Ser Phe Ala Asp
 130 135 140
 Asp Phe Val Arg Ser Ser Lys Gln His Tyr Asn Cys Glu His Ser Lys
 145 150 155 160
 Ile Asn Phe Arg Asp Lys Arg Ser Ala Leu Gln Ser Ile Asn Glu Trp
 165 170 175
 Ala Ala Gln Thr Thr Asp Gly Lys Leu Pro Glu Val Thr Lys Asp Val
 180 185 190
 Glu Arg Thr Asp Gly Ala Leu Leu Val Asn Ala Met Phe Phe Lys Arg
 195 200 205
 Glu Ser Gly Ala Arg Ser Gly Val Leu Leu Leu Leu Pro Gly Pro Pro
 210 215 220
 Ala Arg Val Arg Thr Thr Phe Arg Ala Leu His Ser Ser Leu Pro Leu

225 230 235 240
Ile Tyr Ala Val Thr Thr Gln Gly Gly Arg Thr Val Thr Gln Leu Phe
 245 250 255
Val Gln Thr Gly Asn
 260

<210> 604

<211> 281

<212> PRT

<213> Homo sapiens

<400> 604

Met Ala Glu Ala Ala Pro Ala Arg Asp Pro Glu Thr Asp Lys His Thr
1 5 10 15
Glu Asp Gln Ser Pro Ser Thr Pro Leu Pro Gln Pro Ala Ala Glu Lys
 20 25 30
Asn Ser Tyr Leu Tyr Ser Thr Glu Ile Thr Leu Trp Thr Val Val Ala
 35 40 45
Ala Ile Gln Ala Leu Glu Lys Lys Val Asp Ser Cys Leu Thr Arg Leu
 50 55 60
Leu Thr Leu Glu Gly Arg Thr Gly Thr Ala Glu Lys Lys Leu Ala Asp
65 70 75 80
Cys Glu Lys Thr Ala Val Glu Phe Gly Asn Gln Leu Glu Gly Lys Trp
 85 90 95
Ala Val Leu Gly Thr Leu Leu Gln Glu Tyr Gly Leu Leu Gln Arg Arg
 100 105 110
Leu Glu Asn Val Glu Asn Leu Leu Arg Asn Arg Asn Phe Trp Ile Leu
 115 120 125

Arg Leu Pro Pro Gly Ser Lys Gly Glu Ala Pro Lys Val Pro Val Thr
 130 135 140

Phe Asp Asp Val Ala Val Tyr Phe Ser Glu Leu Glu Trp Gly Lys Leu
 145 150 155 160

Glu Asp Trp Gln Lys Glu Leu Tyr Lys His Val Met Arg Gly Asn Tyr
 165 170 175

Glu Thr Leu Val Ser Leu Asp Tyr Ala Ile Ser Lys Pro Asp Ile Leu
 180 185 190

Thr Arg Ile Glu Arg Gly Glu Glu Pro Cys Leu Asp Arg Trp Gly Gln
 195 200 205

Glu Lys Gly Asn Glu Val Glu Val Gly Arg Pro Arg Met Met Gly Thr
 210 215 220

Gly Leu Pro Pro Tyr Pro Glu His Leu Thr Ser Pro Leu Ser Pro Ala
 225 230 235 240

Gln Glu Glu Leu Lys Glu Gly Gln Ala Pro Lys Gln Gln Gln Asp Ser
 245 250 255

Glu Ala Arg Val Ala Pro Ala Gly Pro Glu Ala Gly Leu Ala Leu Arg
 260 265 270

Thr Asp Leu Gln Gly Glu Ala Gln Ile
 275 280

<210> 605

<211> 126

<212> PRT

<213> Homo sapiens

<400> 605

Met Ser Pro Pro Pro Leu Leu Phe Pro Gly Pro Ser His His His Val

| | | | |
|---|-----|-----|----|
| 1 | 5 | 10 | 15 |
| Ser Pro Gly Leu Leu His Ala Pro Pro Thr Trp Ser Pro His Phe Cys | | | |
| 20 | 25 | 30 | |
| Pro Gly Arg Gly Trp Cys Val Leu His Pro Ala Thr Gln Gln Ser Glu | | | |
| 35 | 40 | 45 | |
| Gly Ser Ser Tyr Asn Ile Ser Gln Ile Thr Ser Leu Phe Ala Gln Asn | | | |
| 50 | 55 | 60 | |
| Pro Ala Met Ala Pro Ile Ser Phe Arg Val Asn Ser Lys Ala Pro Tyr | | | |
| 65 | 70 | 75 | 80 |
| Leu Pro Thr Ala Pro His Ser Arg Thr Phe Pro Pro Val Val Leu Pro | | | |
| 85 | 90 | 95 | |
| Leu Val Pro Ser Ile Pro Ala Thr Gly Ile Ser Leu Leu Ala Pro Glu | | | |
| 100 | 105 | 110 | |
| Leu Thr Arg Tyr Gly Ala Ala Ser Gly Pro Leu His Leu Gln | | | |
| 115 | 120 | 125 | |

<210> 606

<211> 266

<212> PRT

<213> Homo sapiens

<400> 606

| | | | |
|---|----|----|----|
| Met Val Met Ala Asp Gln Asn Gln Val Trp Val Gly Ser Glu Asp Ser | | | |
| 1 | 5 | 10 | 15 |
| Val Ile Tyr Ile Ile Asn Val His Ser Met Ser Cys Asn Lys Gln Leu | | | |
| 20 | 25 | 30 | |
| Thr Ala His Cys Ser Ser Val Thr Asp Leu Ile Val Gln Asp Gly Gln | | | |
| 35 | 40 | 45 | |

Glu Ala Pro Ser Asn Val Tyr Ser Cys Ser Met Asp Gly Met Val Leu
 50 55 60
 Val Trp Asn Val Ser Thr Leu Gln Val Thr Ser Arg Phe Gln Leu Pro
 65 70 75 80
 Arg Gly Gly Leu Thr Ser Ile Arg Leu His Gly Gly Arg Leu Trp Cys
 85 90 95
 Cys Thr Gly Asn Ser Ile Met Val Met Lys Met Asn Gly Ser Leu His
 100 105 110
 Gln Glu Leu Lys Ile Glu Glu Asn Phe Lys Asp Thr Ser Thr Ser Phe
 115 120 125
 Leu Ala Phe Gln Leu Leu Pro Glu Glu Glu Gln Leu Trp Ala Ala Cys
 130 135 140
 Ala Gly Arg Ser Glu Val Tyr Ile Trp Ser Leu Lys Asp Leu Ala Gln
 145 150 155 160
 Pro Pro Gln Arg Val Pro Leu Glu Asp Cys Ser Glu Ile Asn Cys Met
 165 170 175
 Ile Arg Val Lys Lys Gln Val Gly Trp Arg Ala Arg His Pro Gln His
 180 185 190
 Pro Arg Gln Val Ser Leu Ala Leu Ala Ala Ser Pro Cys Ser Arg Glu
 195 200 205
 Pro Ala Ala Arg Pro Arg Ala Leu Leu Pro Ser Pro Leu Arg Val Pro
 210 215 220
 Leu Leu Thr Gly Thr Cys Arg Val Gly Ala Asn Gly Pro Thr Gly His
 225 230 235 240
 His Val Leu Val Ser Trp Cys Gly Pro Ser Thr Pro Gln Arg Ile Pro
 245 250 255
 Pro Asn Trp Met Ala Ser Asn Asp Arg Thr
 260 265

<210> 607

<211> 251

<212> PRT

<213> Homo sapiens

<400> 607

Met Gly Met Gly Thr Leu Ala Trp Gly Gln Pro Leu Leu Pro Arg Cys

1

5

10

15

Leu Cys Pro Arg Ala Gly Gln Arg Gln Pro Val Val Thr Ala Ala Val

20

25

30

Ala Ala Pro Gln Leu Thr Met Asn Asp Phe Ser Val His Arg Ile Ile

35

40

45

Gly Arg Gly Gly Phe Gly Glu Val Tyr Gly Cys Arg Lys Ala Asp Thr

50

55

60

Gly Lys Met Tyr Ala Met Lys Cys Leu Asp Lys Lys Arg Ile Lys Met

65

70

75

80

Lys Gln Gly Glu Thr Leu Ala Leu Asn Glu Arg Ile Met Leu Ser Leu

85

90

95

Val Ser Thr Gly Asp Cys Pro Phe Ile Val Cys Met Ser Tyr Ala Phe

100

105

110

His Thr Pro Asp Lys Leu Ser Phe Ile Leu Asp Leu Met Asn Gly Gly

115

120

125

Asp Leu His Tyr His Leu Ser Gln His Gly Val Phe Ser Glu Ala Asp

130

135

140

Met Arg Phe Tyr Ala Ala Glu Ile Ile Leu Gly Leu Glu His Met His

145

150

155

160

Asn Arg Phe Val Val Tyr Arg Asp Leu Lys Val Ser Ala Pro Ala Val

165

170

175

Pro Arg Leu Asp Leu Arg Gly Cys Pro Leu Leu Pro Leu Asp Ile Pro
 180 185 190
 Ala Thr Arg Pro Arg Gly Val Gly Leu Leu Gly His Gly Arg Pro Val
 195 200 205
 Ser Ser His Leu Arg Pro Cys Pro Ser His Arg Ala Thr Leu Trp Val
 210 215 220
 Gln Val Val Ala Gly Asp Arg Arg Glu Asp Pro His Leu Cys Pro Phe
 225 230 235 240
 Phe Gly Tyr Pro Ser Ser Ser Pro Val Lys Gln
 245 250

<210> 608

<211> 350

<212> PRT

<213> Homo sapiens

<400> 608

Met Met Glu Ser Ser Glu Leu Thr Pro Lys Gln Glu Ile Phe Lys Gly
 1 5 10 15
 Ser Glu Ser Ser Asn Ser Thr Ser Gly Gly Leu Phe Gly Val Val Pro
 20 25 30
 Gly Gly Thr Glu Thr Gly Asp Val Cys Glu Asp Thr Phe Lys Glu Leu
 35 40 45
 Glu Gly Gln Pro Ser Asn Glu Glu Gly Ser Arg Leu Glu Ser Asp Phe
 50 55 60
 Leu Glu Ile Ile Asp Glu Asp Lys Lys Lys Ser Thr Lys Asp Arg Tyr
 65 70 75 80
 Glu Glu Tyr Lys Glu Val Glu Glu His Pro Pro Leu Ser Ser Ser Pro

| | | | |
|---|-----|-----|-----|
| | 85 | 90 | 95 |
| Val Glu His Glu Gly Val Leu Lys Gly Gln Lys Ser Tyr Arg Cys Asp | | | |
| 100 | 105 | 110 | |
| Glu Cys Gly Lys Ala Phe Tyr Trp Ser Ser His Leu Ile Gly His Arg | | | |
| 115 | 120 | 125 | |
| Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys | | | |
| 130 | 135 | 140 | |
| Thr Phe Arg Gln Thr Ser Gln Leu Ile Val His Leu Arg Thr His Thr | | | |
| 145 | 150 | 155 | 160 |
| Gly Glu Lys Pro Tyr Glu Cys Ser Glu Cys Gly Lys Ala Tyr Arg His | | | |
| 165 | 170 | 175 | |
| Ser Ser His Leu Ile Gln His Gln Arg Leu His Asn Gly Glu Lys Pro | | | |
| 180 | 185 | 190 | |
| Tyr Lys Cys Asn Glu Cys Ala Lys Ala Phe Asn Gln Ser Ser Lys Leu | | | |
| 195 | 200 | 205 | |
| Phe Asp His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Lys | | | |
| 210 | 215 | 220 | |
| Glu Cys Gly Ala Ala Phe Ser Arg Ser Lys Asn Leu Val Arg His Gln | | | |
| 225 | 230 | 235 | 240 |
| Phe Leu His Thr Gly Lys Lys Pro Tyr Lys Cys Asn Glu Cys Gly Arg | | | |
| 245 | 250 | 255 | |
| Ala Phe Cys Ser Asn Arg Asn Leu Ile Asp His Gln Arg Thr His Thr | | | |
| 260 | 265 | 270 | |
| Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Ser Arg | | | |
| 275 | 280 | 285 | |
| Ser Lys Cys Leu Ile Arg His Gln Ser Leu His Thr Gly Glu Lys Pro | | | |
| 290 | 295 | 300 | |
| Tyr Lys Cys Ser Glu Cys Gly Lys Ala Phe Asn Gln Ile Ser Gln Leu | | | |
| 305 | 310 | 315 | 320 |

Val Glu His Glu Arg Ile His Thr Gly Glu Lys Pro Phe Lys Cys Ser

325

330

335

Glu Cys Gly Lys Ala Phe Gly Leu Ser Lys Cys Leu Ile Arg

340

345

350

<210> 609

<211> 191

<212> PRT

<213> Homo sapiens

<400> 609

Met Tyr Ala Lys Arg Pro Glu Ser Phe Ser Cys Lys Lys Leu Ala Met

1

5

10

15

Ser Lys Lys Val Thr Pro Ala Ser Thr Gln Cys Val Arg Phe Pro Phe

20

25

30

Pro Ser Thr Val Val Cys Lys Lys Asn Leu Asp Ser Thr Thr Val Ala

35

40

45

Val His Gly Glu Glu Ile Tyr Cys Lys Ser Cys Tyr Gly Lys Lys Tyr

50

55

60

Gly Pro Lys Gly Tyr Gly Tyr Gly Gln Gly Ala Gly Thr Leu Ser Thr

65

70

75

80

Asp Lys Gly Glu Ser Leu Gly Ile Lys His Glu Glu Ala Pro Gly His

85

90

95

Arg Pro Thr Thr Asn Pro Asn Ala Ser Lys Phe Ala Gln Lys Ile Gly

100

105

110

Gly Ser Glu Arg Cys Pro Arg Cys Ser Gln Ala Val Tyr Ala Ala Glu

115

120

125

Lys Val Ile Gly Ala Gly Lys Ser Trp His Lys Ala Cys Phe Arg Cys

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Ala Lys Cys Gly Lys Gly Leu Glu Ser Thr Thr Leu Ala Asp Lys Asp | | |
| 145 | 150 | 155 |
| Gly Glu Ile Tyr Cys Lys Gly Cys Tyr Ala Lys Asn Phe Gly Pro Lys | | 160 |
| | 165 | 170 |
| Gly Phe Gly Phe Gly Gln Gly Ala Gly Ala Leu Val His Ser Glu | | 175 |
| | 180 | 185 |
| | | 190 |

<210> 610

<211> 482

<212> PRT

<213> Homo sapiens

<400> 610

| | | |
|---|-----|-----|
| Met Trp Thr Val Pro Ser Phe Thr Asn Asp Ser Tyr Gln Val Tyr Asn | | |
| 1 | 5 | 10 |
| Val Phe Ser Thr Asn Ser Phe Gln Leu Leu Thr Val Lys Arg Thr Pro | | |
| | 20 | 25 |
| His Glu Ala Trp Arg Val Pro Leu Thr Thr Lys Thr Asn Lys Thr Lys | | 30 |
| | 35 | 40 |
| Gly Leu Pro Asp Cys Pro Lys Lys Pro Thr Asn Gly Pro Phe Ile Val | | 45 |
| | 50 | 55 |
| Thr Ser Ile Leu Trp Asp Asn Cys Asn Ala Pro Lys Ala Val Val Leu | | 60 |
| | 65 | 70 |
| Gln Thr Leu Ala Met Gly Ile Val Ile Asp Trp Ala Pro Lys Gly His | | 75 |
| | 85 | 90 |
| Tyr Trp Gln Asp Cys Ser Ser Lys Asn Thr Leu Cys Ser Glu Phe Ile | | 95 |
| | 100 | 105 |
| | | 110 |

| | | | |
|---|-----|-----|-----|
| Tyr Ser Leu Asp Tyr Ile Glu His Gly Trp Gln Ser Tyr Thr Met Arg | | | |
| 115 | 120 | 125 | |
| Gln Arg Val Ser Pro Tyr Pro Phe Lys Trp Met Asp Thr Gly Ile Ala | | | |
| 130 | 135 | 140 | |
| Pro Pro Arg Pro Lys Ile Ile His Pro Phe Phe Thr Pro Glu His Pro | | | |
| 145 | 150 | 155 | 160 |
| Glu Leu Trp Lys Leu Ala Ala Ala Leu Ser Gly Ile Lys Ile Trp Asn | | | |
| 165 | 170 | 175 | |
| Thr Thr Tyr Gln Leu Leu Arg Thr Lys Thr Lys Thr Pro Thr Phe Asn | | | |
| 180 | 185 | 190 | |
| Ile Thr Leu Ile Ser Glu Trp Val Ile Pro Ile Arg Ser Cys Val Lys | | | |
| 195 | 200 | 205 | |
| Pro Pro Tyr Met Leu Leu Val Gly Asn Ile Ile Met Met Pro Asp Ala | | | |
| 210 | 215 | 220 | |
| Gln Thr Ile Glu Cys His Asn Cys Lys Leu Phe Thr Cys Ile Asp Ala | | | |
| 225 | 230 | 235 | 240 |
| Thr Phe Asn Pro Thr Thr Ser Ile Leu Leu Val Arg Ala Arg Glu Gly | | | |
| 245 | 250 | 255 | |
| Val Trp Ile Pro Val Ser Leu His Arg Pro Trp Glu Ser Ser Pro Ser | | | |
| 260 | 265 | 270 | |
| Ile His Ile Val Asn Glu Val Leu Lys Asp Ile Leu Lys Arg Thr Lys | | | |
| 275 | 280 | 285 | |
| Arg Phe Ile Phe Thr Leu Ile Ala Val Leu Ala Gly Leu Leu Ala Val | | | |
| 290 | 295 | 300 | |
| Thr Ala Thr Ala Ala Thr Ala Gly Val Ala Ile Arg Ser Ser Val Gln | | | |
| 305 | 310 | 315 | 320 |
| Thr Ala His Tyr Val Glu Ala Cys Gln Lys Asn Ser Ser Arg Leu Trp | | | |
| 325 | 330 | 335 | |
| Asn Ser Gln Ala Gln Ile Asp Gln Lys Leu Ala Asn Gln Ile Asn Asp | | | |

| | | | |
|---|-----------------------------|---------|-----|
| 340 | 345 | 350 | |
| Leu Arg Gln Ser Val Thr Trp | Leu Gly Asp Arg Val Met Asn | Leu Gln | |
| 355 | 360 | 365 | |
| His Arg Met Gln Leu Gln Cys Asp Trp Asn Thr Ser Asp Tyr Cys Ile | | | |
| 370 | 375 | 380 | |
| Thr Pro Tyr Ala Tyr Asn Gln Asp Gln His Ser Trp Glu Asn Val Ser | | | |
| 385 | 390 | 395 | 400 |
| Arg His Leu Lys Ala Trp Asp Asp Asn Leu Thr Leu Asp Ile Ser Gln | | | |
| 405 | 410 | 415 | |
| Leu Lys Glu Gln Ile Phe Glu Ala Ser Gln Val His Leu Ser Thr Val | | | |
| 420 | 425 | 430 | |
| Pro Gly Ser His Ile Phe Glu Gly Ile Thr Lys Gln Leu Pro Asp Phe | | | |
| 435 | 440 | 445 | |
| Asn Pro Phe Lys Trp Leu Lys Pro Val Arg Gly Ser Leu Leu Leu Leu | | | |
| 450 | 455 | 460 | |
| Ala Leu Leu Ile Leu Val Cys Leu Cys Cys Leu Leu Leu Val Cys Arg | | | |
| 465 | 470 | 475 | 480 |
| Cys Leu | | | |

<210> 611

<211> 465

<212> PRT

<213> Homo sapiens

<400> 611

Met Ala Ser Val Cys Cys Leu Pro Pro Pro Arg Ala Thr Trp Ala Ser

1

5

10

15

Trp Thr Arg Cys Pro Gly Cys Thr Thr Cys Trp Leu Ala Pro Thr Pro
 20 25 30
 Pro Arg Cys Trp Pro Ser Pro Trp Ser Arg Gly Gly Asp Ser Trp Pro
 35 40 45
 Pro Cys Pro Arg Thr Val Pro Ser Ala Ser Gly Ala Trp Pro Pro Cys
 50 55 60
 Asn Ser Ser Gly Ala Val Arg Ser Phe Ser Leu Glu Ala Ala Glu Val
 65 70 75 80
 Leu Val Glu His Thr Cys His Arg Gly Ala Val Thr Gly Leu Thr Ala
 85 90 95
 Thr Pro Asp Gly Arg Leu Leu Phe Ser Ser Cys Ser Gln Gly Ser Leu
 100 105 110
 Ala Gln Tyr Ser Cys Ala Asp Pro Gln Trp His Val Leu Arg Val Ala
 115 120 125
 Ala Asp Met Val Cys Pro Asp Ala Pro Ala Ser Pro Ser Ala Leu Ala
 130 135 140
 Val Ser Arg Asp Gly Arg Leu Leu Ala Phe Val Gly Pro Ser Arg Cys
 145 150 155 160
 Thr Val Thr Val Met Gly Ser Ala Ser Leu Asp Glu Leu Leu Arg Val
 165 170 175
 Asp Ile Gly Thr Leu Asp Leu Ala Ser Ser Arg Leu Asp Ser Ala Met
 180 185 190
 Ala Val Cys Phe Gly Pro Ala Ala Leu Gly Gln Leu Leu Val Ser Thr
 195 200 205
 Ser Ser Asn Arg Val Val Val Leu Asp Ala Val Ser Gly Arg Ile Ile
 210 215 220
 Arg Glu Leu Pro Gly Val His Pro Glu Pro Cys Pro Ser Leu Thr Leu
 225 230 235 240
 Ser Glu Asp Ala Arg Phe Leu Leu Ile Ala Ala Gly Arg Thr Ile Lys

| | | | |
|---|-----|-----|-----|
| | 245 | 250 | 255 |
| Val Trp Asp Tyr Ala Thr Gln Ala Ser Pro Gly Pro Gln Val Tyr Ile | | | |
| | 260 | 265 | 270 |
| Gly His Ser Glu Pro Val Gln Ala Val Ala Phe Ser Pro Asp Gln Gln | | | |
| | 275 | 280 | 285 |
| Gln Val Leu Ser Ala Gly Asp Ala Val Phe Leu Trp Asp Val Leu Ala | | | |
| | 290 | 295 | 300 |
| Thr Thr Glu Ser Asp Gln Ser Phe Pro Gly Ala Pro Pro Ala Cys Lys | | | |
| 305 | 310 | 315 | 320 |
| Thr Gly Pro Gly Ala Gly Pro Leu Glu Asp Ala Ala Ser Arg Ala Ser | | | |
| | 325 | 330 | 335 |
| Glu Leu Pro Arg Gln Gln Val Pro Lys Pro Cys Gln Ala Ser Pro Pro | | | |
| | 340 | 345 | 350 |
| Arg Leu Gly Val Cys Ala Arg Pro Pro Glu Gly Gly Asp Gly Ala Arg | | | |
| | 355 | 360 | 365 |
| Asp Thr Arg Asn Ser Gly Ala Pro Arg Thr Thr Tyr Leu Ala Ser Cys | | | |
| 370 | 375 | 380 | |
| Lys Ala Phe Thr Leu Ala Arg Val Ser Cys Ser Pro His Ser Ala Lys | | | |
| 385 | 390 | 395 | 400 |
| Gly Thr Cys Pro Pro Pro Ala Ser Gly Gly Trp Leu Arg Leu Lys Ala | | | |
| | 405 | 410 | 415 |
| Val Val Gly Tyr Ser Gly Asn Gly Arg Ala Asn Met Val Trp Arg Pro | | | |
| | 420 | 425 | 430 |
| Asp Thr Gly Gly Gly Gln Glu Pro Thr Pro Thr Pro Ser Gln Asp Ala | | | |
| | 435 | 440 | 445 |
| Ala Ala Arg Gly Pro Ala Val Ser Thr Pro Arg Pro Gly Pro Gly Gly | | | |
| | 450 | 455 | 460 |
| Lys | | | |
| 465 | | | |

<210> 612

<211> 134

<212> PRT

<213> Homo sapiens

<400> 612

Met Gly Lys Lys Gln Ser Arg Lys Thr Gly Asn Ser Lys Lys Gln Ser

1 5 10 15

Ala Ser Pro Pro Pro Lys Glu Cys Ser Ser Ser Pro Ala Thr Glu Gln

20 25 30

Ser Trp Met Glu Asn Asp Phe Asp Glu Leu Arg Glu Ala Gly Phe Arg

35 40 45

Arg Ser Asn Tyr Ser Glu Leu Arg Glu Asp Ile Gln Thr Lys Gly Lys

50 55 60

Lys Val Glu Asn Phe Glu Lys Asn Leu Glu Glu Cys Ile Thr Arg Ile

65 70 75 80

Thr Asn Thr Glu Lys Cys Leu Lys Glu Leu Met Glu Leu Lys Thr Lys

85 90 95

Ala Arg Glu Leu Arg Glu Glu Cys Arg Ser Leu Arg Ser Arg Cys Asp

100 105 110

Gln Leu Glu Glu Arg Val Ser Ala Met Glu Asp Glu Met Asn Glu Met

115 120 125

Lys Gln Glu Gly Lys Val

130

<210> 613

<211> 4376

<212> DNA

<213> Homo sapiens

<400> 613

| | | | | | | |
|------------|-------------|-------------|------------|------------|-------------|------|
| tgaccttctc | tcctccctgt | gtcttttttt | tctctttaga | gatgggggtc | ttgctctgtc | 60 |
| actccagctg | gagcacagtg | gtgcaatcgg | agctcactga | ctgcggcctg | caactcctgg | 120 |
| gctcaagtga | ttctgccgcc | tcagcctctc | aacgtgctgc | gattagagag | tctgtagaag | 180 |
| aggcgacacc | agggcttcca | aatgaacaac | cgaaggaag | atatggaaat | cacgtcccac | 240 |
| taccggcacc | tgctgcggga | gctcaacgag | cagaggcagc | acggcgtcct | gtgcgacgtc | 300 |
| tgcgtggctg | tggagggcaa | ggtcttcaag | gcgcacaaga | acgtcctgct | gggcagcagc | 360 |
| cgctacttca | agacgtctta | ctgccaggtg | cagaagacgt | cggagcaggc | cacggtcacg | 420 |
| cacctggaca | tcgtcacggc | ccagggttcc | aaggccatca | tcgacttcat | gtactcagcg | 480 |
| cacctggcgc | tcaccagcag | gaacgtcatc | gaggtgatgt | cagccgccag | cttctctcag | 540 |
| atgacggaca | tcgtgcaagc | ctgccacgac | ttcatcaagg | cggcgctgga | catcagcatc | 600 |
| aagtcggacg | cctcagatga | gcttgcggag | ttcgagatcg | gcgcctcgtc | cagcagcagc | 660 |
| acggaagctc | tcattctcggc | cgtgatggct | gggaggagca | tctccccgtg | gctggcacgg | 720 |
| cgaacgagtc | ctgccgattc | ttccggagac | tcggccatcg | ccagctgtca | cgacggaggg | 780 |
| agcagctacg | ggaaagagga | tcaggagccc | aaggccgatg | gccctgatga | tgtttcttca | 840 |
| cagcctctat | ggcctggaga | cgtgggctac | gggcctctgc | gcatcaagga | agagcaggtt | 900 |
| tcaccgtctc | agtacggagg | gagcgagctg | ccttctgcc | aggacggtgc | agtacagaac | 960 |
| tctttctcag | agcagagtgc | tggatgatgcc | tggcagccca | cgggccgaag | gaagaatcgg | 1020 |
| aaaaacaaag | agaccgtccg | gcacatcaca | cagcaggtgg | aagatgacag | ccgggccagc | 1080 |
| tccccggtgc | cgtccttcct | gccgacgtcg | gggtggccgt | tcagcagccg | agactcaa | 1140 |
| gcggacctgt | ccgtcaccga | agccagcagc | tccgacagcc | gaggagagag | ggccgagctc | 1200 |
| tatgcacagg | tggaggaggg | tctcctggga | ggagaagcca | gctatctggg | ccctcccctc | 1260 |
| accccagaga | aggacgacgc | cctgcatcag | gccaccgcgg | tggccaacct | gcgcgcggcg | 1320 |
| ctcatgagta | agaacagcct | gctgtcgctg | aaggccgacg | tgctggggga | tgacggctcc | 1380 |
| ctgctgttcg | agtacctgcc | cagaggggcc | cactcgctgt | ccctgaatga | gttcacgggtg | 1440 |

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ccgcgcagcc cccagggagg cctgacaag gacttcgcct ggctctccta ggcccgcgcg 1980
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tgggcgcggt ggccgcctcc ttccctccag gacctgcccg tgtgaagacc ccccgagtg 3360
ctgagcttca gggctgcgtg gaaagagttt ttactctctt tttctagcct gtataccagg 3420
cttttcccca cattgtcagg tagagcacca gcttcctga ccgctgctgc tcggggaggg 3480
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<211> 589

<212> PRT

<213> Homo sapiens

<400> 614

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| | | | |
|---|-----|-----|-----|
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| Leu Leu Arg Glu Leu Asn Glu Gln Arg Gln His Gly Val Leu Cys Asp | | | |
| 20 | 25 | 30 | |
| Val Cys Val Val Val Glu Gly Lys Val Phe Lys Ala His Lys Asn Val | | | |
| 35 | 40 | 45 | |
| Leu Leu Gly Ser Ser Arg Tyr Phe Lys Thr Leu Tyr Cys Gln Val Gln | | | |
| 50 | 55 | 60 | |
| Lys Thr Ser Glu Gln Ala Thr Val Thr His Leu Asp Ile Val Thr Ala | | | |
| 65 | 70 | 75 | 80 |
| Gln Gly Phe Lys Ala Ile Ile Asp Phe Met Tyr Ser Ala His Leu Ala | | | |
| 85 | 90 | 95 | |
| Leu Thr Ser Arg Asn Val Ile Glu Val Met Ser Ala Ala Ser Phe Leu | | | |
| 100 | 105 | 110 | |
| Gln Met Thr Asp Ile Val Gln Ala Cys His Asp Phe Ile Lys Ala Ala | | | |
| 115 | 120 | 125 | |
| Leu Asp Ile Ser Ile Lys Ser Asp Ala Ser Asp Glu Leu Ala Glu Phe | | | |
| 130 | 135 | 140 | |
| Glu Ile Gly Ala Ser Ser Ser Ser Ser Thr Glu Ala Leu Ile Ser Ala | | | |
| 145 | 150 | 155 | 160 |
| Val Met Ala Gly Arg Ser Ile Ser Pro Trp Leu Ala Arg Arg Thr Ser | | | |
| 165 | 170 | 175 | |
| Pro Ala Asp Ser Ser Gly Asp Ser Ala Ile Ala Ser Cys His Asp Gly | | | |
| 180 | 185 | 190 | |
| Gly Ser Ser Tyr Gly Lys Glu Asp Gln Glu Pro Lys Ala Asp Gly Pro | | | |
| 195 | 200 | 205 | |
| Asp Asp Val Ser Ser Gln Pro Leu Trp Pro Gly Asp Val Gly Tyr Gly | | | |
| 210 | 215 | 220 | |
| Pro Leu Arg Ile Lys Glu Glu Gln Val Ser Pro Ser Gln Tyr Gly Gly | | | |
| 225 | 230 | 235 | 240 |

Ser Glu Leu Pro Ser Ala Lys Asp Gly Ala Val Gln Asn Ser Phe Ser
245 250 255
Glu Gln Ser Ala Gly Asp Ala Trp Gln Pro Thr Gly Arg Arg Lys Asn
260 265 270
Arg Lys Asn Lys Glu Thr Val Arg His Ile Thr Gln Gln Val Glu Asp
275 280 285
Asp Ser Arg Ala Ser Ser Pro Val Pro Ser Phe Leu Pro Thr Ser Gly
290 295 300
Trp Pro Phe Ser Ser Arg Asp Ser Asn Ala Asp Leu Ser Val Thr Glu
305 310 315 320
Ala Ser Ser Ser Asp Ser Arg Gly Glu Arg Ala Glu Leu Tyr Ala Gln
325 330 335
Val Glu Glu Gly Leu Leu Gly Gly Glu Ala Ser Tyr Leu Gly Pro Pro
340 345 350
Leu Thr Pro Glu Lys Asp Asp Ala Leu His Gln Ala Thr Ala Val Ala
355 360 365
Asn Leu Arg Ala Ala Leu Met Ser Lys Asn Ser Leu Leu Ser Leu Lys
370 375 380
Ala Asp Val Leu Gly Asp Asp Gly Ser Leu Leu Phe Glu Tyr Leu Pro
385 390 395 400
Arg Gly Ala His Ser Leu Ser Leu Asn Glu Phe Thr Val Ile Arg Lys
405 410 415
Lys Phe Lys Cys Pro Tyr Cys Ser Phe Ser Ala Met His Gln Cys Ile
420 425 430
Leu Lys Arg His Met Arg Ser His Thr Gly Glu Arg Pro Tyr Pro Cys
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<211> 30

<212> RNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: an artificially synthesized oligo-cap linker sequence

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<210> 616

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<212> DNA

<213> Artificial Sequence

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<211> 21

<212> DNA

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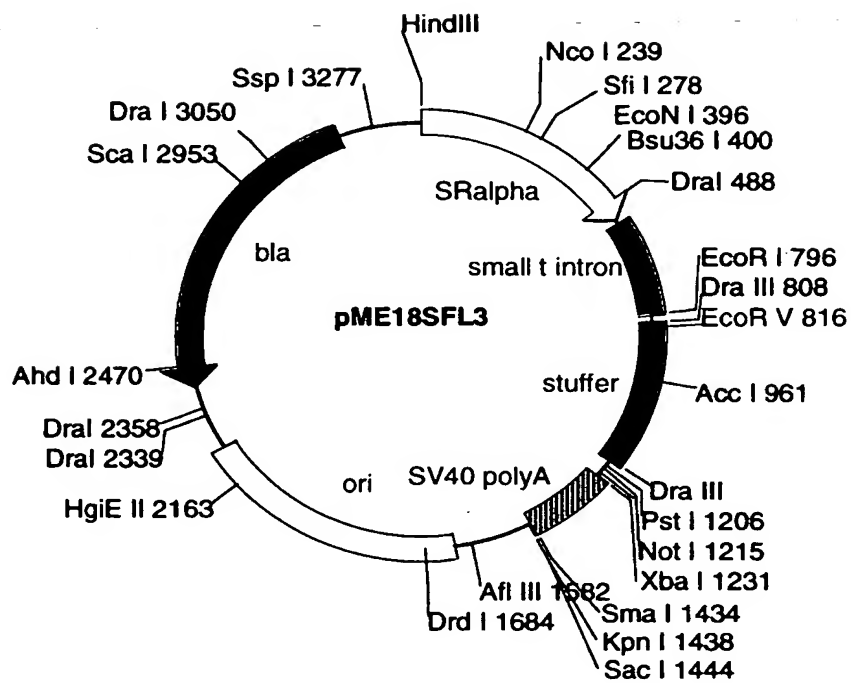
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【図面の簡単な説明】

【図 1】 pME18SFL3のベクターのマップ

【書類名】 図面

【図 1】



【書類名】 要約書

【要約】

【課題】 新規な全長cDNAの提供。

【解決手段】 ヒトに由来する 3 0 7 のcDNAを単離した。そしてこのcDNAの全長塩基配列、並びにこの塩基配列によってコードされるアミノ酸配列を明らかにした。本発明のcDNAは全長であるため、翻訳開始点を含み、蛋白質の機能解析において有用な情報を与える。

【選択図】 なし

特願 2 0 0 3 - 1 3 1 3 9 2

出 願 人 履 歴 情 報

識別番号

[5 0 2 2 3 5 5 2 2]

1. 変更年月日

2 0 0 2 年 6 月 2 8 日

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